

INTERSECTION IMPROVEMENTS

AT

35-37 HASTINGS STREET (ROUTE 16)

IN THE TOWN OF

MENDON

WORCESTER COUNTY

ACCESS PERMIT APPLICATION 25%/75% SUBMITTAL

MENDON
ROUTE 16

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	1	57

PROJECT FILE NO. N/A (ACCESS PERMIT)

TITLE SHEET & INDEX

THESE PLANS ARE SUPPLEMENTED BY THE OCTOBER 2017 CONSTRUCTION STANDARD DETAILS, THE 2015 OVERHEAD SIGNAL STRUCTURE AND FOUNDATION STANDARD DRAWINGS, MASSDOT TRAFFIC MANAGEMENT PLANS AND DETAIL DRAWINGS, THE 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, THE 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING, AND THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK.

DESIGN DESIGNATION - ROUTE 16

DESIGN SPEED	40 MPH
ADT (2021)	24,200
ADT (2031)	25,000
K	8.6%
D	51.5% EB
T (PEAK HOUR)	1.9%
T (AVERAGE DAY)	3.9%
DHV (2031)	2,150
DDHV (2031)	1,110 (EB)
FUNCTIONAL CLASSIFICATION	URBAN PRINCIPAL ARTERIAL

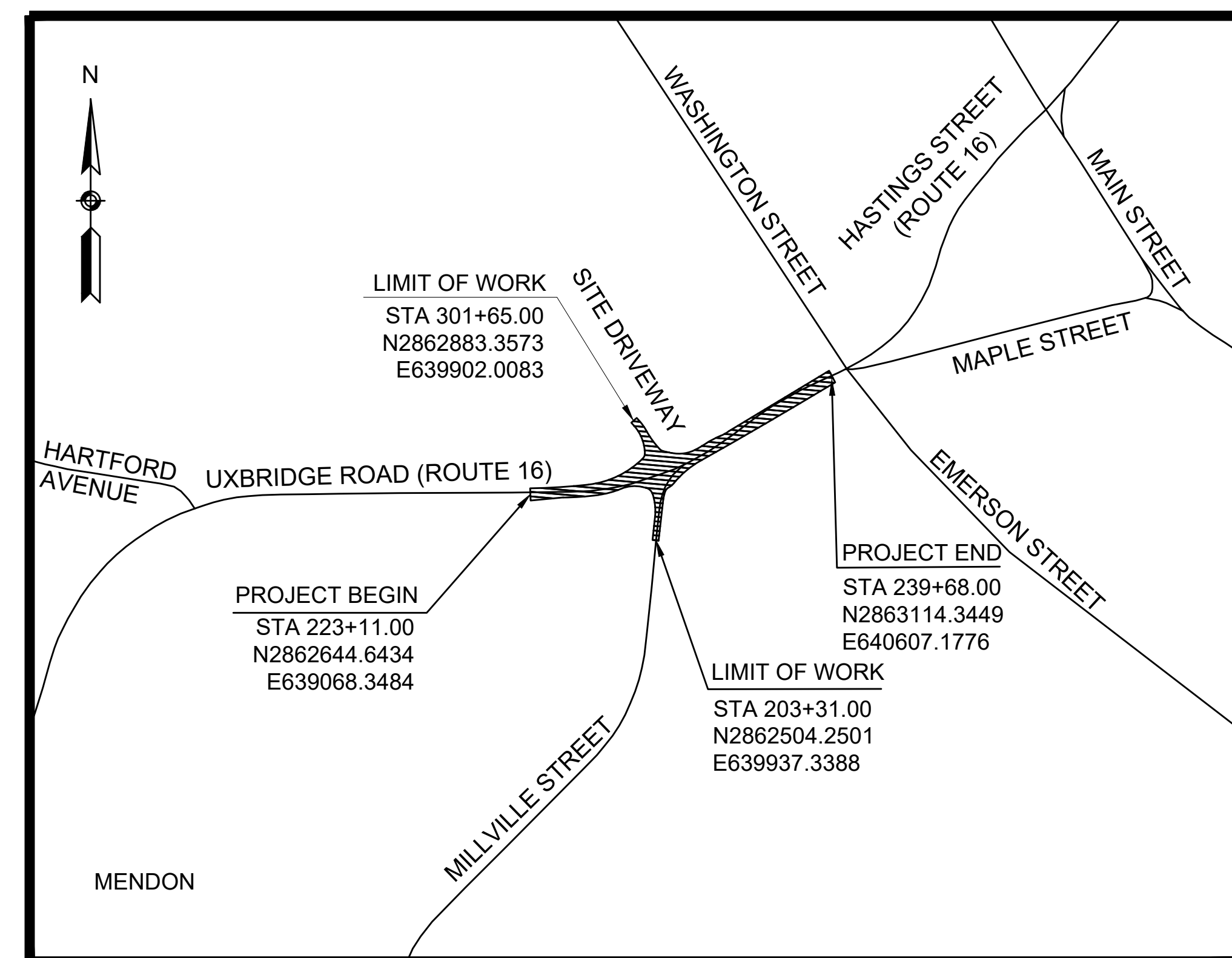
DESIGN DESIGNATION - MILLVILLE STREET

DESIGN SPEED	35 MPH
ADT (2021)	4,120
ADT (2031)	4,250
K	9.7%
D	51.2% NB
T (PEAK HOUR)	2.1%
T (AVERAGE DAY)	2.7%
DHV (2031)	410
DDHV (2031)	210 (NB)
FUNCTIONAL CLASSIFICATION	URBAN MINOR ARTERIAL

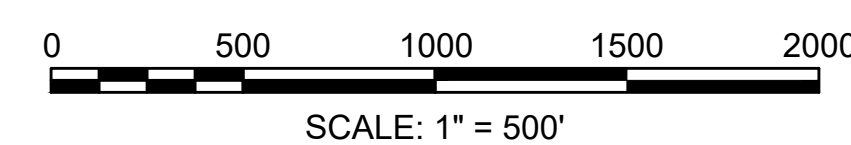
DESIGN DESIGNATION - SITE DRIVEWAY

DESIGN SPEED	25 MPH
ADT (2021)	N/A
ADT (2031)	4,860
K	8.9%
D	50.0%
T (PEAK HOUR)	0.0%
T (AVERAGE DAY)	0.0%
DHV (2031)	430
DDHV (2031)	220 (SB)
FUNCTIONAL CLASSIFICATION	LOCAL

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LENGTH OF PROJECT = 925 FEET = 0.18 MILES



TETRA TECH, INC.
100 Nickerson Road
Marlborough, MA 01752

XX/XX/XXXX	FIRST (25%/75%) SUBMISSION	0
DATE	DESCRIPTION	REV #

GENERAL SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
JB	JB	JERSEY BARRIER
CB	CB	CATCH BASIN
		CATCH BASIN CURB INLET
FP	FP	FLAG POLE
GP	GP	GAS PUMP
MB	MB	MAIL BOX
		POST SQUARE
		POST CIRCULAR
WELL	WELL	WELL
EHH	EHH	ELECTRIC HANDHOLE
		FENCE GATE POST
GG	GG	GAS GATE
BHL #	BHL #	BORING HOLE
MW #	MW #	MONITORING WELL
TP #	TP #	TEST PIT
		HYDRANT
		LIGHT POLE
Co.BD.		COUNTY BOUND
		GPS POINT
		CABLE MANHOLE
		DRAINAGE MANHOLE
		ELECTRIC MANHOLE
		GAS MANHOLE
		MISC MANHOLE
		SEWER MANHOLE
		TELEPHONE MANHOLE
		WATER MANHOLE
MHB	MHB	MASSACHUSETTS HIGHWAY BOUND
MON		MONUMENT
SB		STONE BOUND
TB		TOWN OR CITY BOUND
Δ		TRAVERSE OR TRIANGULATION STATION
TPL or GUY	TPL or GUY	TROLLEY POLE OR GUY POLE
HTP		TRANSMISSION POLE
UFB	UFB	UTILITY POLE W/ FIREBOX
UPDL	UPDL	UTILITY POLE WITH DOUBLE LIGHT
ULT	ULT	UTILITY POLE W / 1 LIGHT
UPL	UPL	UTILITY POLE
		BUSH
		TREE
		STUMP
		SWAMP / MARSH
WG	WG	WATER GATE
PM	PM	PARKING METER
		OVERHEAD CABLE/WIRE
		CURBING
-100-99-		CONTOURS (ON-THE-GROUND SURVEY DATA)
-100-99-		CONTOURS (PHOTOGRAMMETRIC DATA)
		UNDERGROUND DRAIN PIPE (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND ELECTRIC DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND GAS MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND SEWER MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND TELEPHONE DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND WATER MAIN (DOUBLE LINE 24 INCH AND OVER)
		BALANCED STONE WALL
		GUARD RAIL - STEEL POSTS
		GUARD RAIL - WOOD POSTS
		CHAIN LINK OR METAL FENCE
		WOOD FENCE
		HAY BALES/SILT FENCE
		TREE LINE
		SAWCUT LINE
		TOP OR BOTTOM OF SLOPE
		EDGE OF PAVEMENT
		LIMIT OF MICROMILLING AND OVERLAY
		BANK OF RIVER OR STREAM
		BORDER OF WETLAND
		100 FT WETLAND BUFFER
		200 FT RIVERFRONT BUFFER
		STATE HIGHWAY LAYOUT
		TOWN OR CITY LAYOUT
		COUNTY LAYOUT
		RAILROAD SIDELINE
		TOWN OR CITY BOUNDARY LINE
		PROPERTY LINE OR APPROXIMATE PROPERTY LINE
		EASEMENT

TRAFFIC SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		CONTROLLER PHASE ACTUATED
		TRAFFIC SIGNAL HEAD (SIZE AS NOTED)
		WIRE LOOP DETECTOR (6' x 6' TYP UNLESS OTHERWISE SPECIFIED)
		VIDEO DETECTION CAMERA
		MICROWAVE DETECTOR
		PEDESTRIAN PUSH BUTTON, SIGN (DIRECTIONAL ARROW AS SHOWN) AND SADDLE
		EMERGENCY PREEMPTION CONFIRMATION STROBE LIGHT
		VEHICULAR SIGNAL HEAD
		VEHICULAR SIGNAL HEAD, OPTICALLY PROGRAMMED
		FLASHING BEACON
		PEDESTRIAN SIGNAL HEAD, (TYPE AS NOTED OR AS SPECIFIED)
		RAILROAD SIGNAL
		SIGNAL POST AND BASE (ALPHA-NUMERIC DESIGNATION NOTED)
		MAST ARM, SHAFT AND BASE (ARM LENGTH AS NOTED)
		HIGH MAST POLE OR TOWER
		SIGN AND POST
		SIGN AND POST (2 POSTS)
		BILLBOARD
		MAST ARM WITH LUMINAIRE
		OPTICAL PRE-EMPTION DETECTOR
		CONTROL CABINET, GROUND MOUNTED
		CONTROL CABINET, POLE MOUNTED
		FLASHING BEACON CONTROL AND METER PEDESTAL
		LOAD CENTER ASSEMBLY
		PULL BOX 12"x12" (OR AS NOTED)
		ELECTRIC HANDHOLE 12"x24" (OR AS NOTED)
		TRAFFIC SIGNAL CONDUIT
		RECTANGULAR RAPID FLASH BEACON

PAVEMENT MARKINGS SYMBOLS		
EXISTING	PROPOSED	DESCRIPTION
		PAVEMENT ARROW - WHITE
ONLY	ONLY	LEGEND "ONLY" - WHITE
	SL	STOP LINE
	CW	CROSSWALK
	6" SWL	6" SOLID WHITE LINE
	12" SWL	12" SOLID WHITE LINE
	6" SYL	6" SOLID YELLOW LINE
	6" DBWL	6" DOUBLE WHITE LINE
	6" DBYL	6" DOUBLE YELLOW LINE
	6" BWL	6" BROKEN WHITE LINE
	6" BYL	6" BROKEN YELLOW LINE
	6" DWL	6" DOTTED WHITE LINE
	6" DYL	6" DOTTED YELLOW LINE
	6" DWLEx	6" DOTTED WHITE LINE EXTENSION (2' DASH, 6' GAP)
	6" DYLEx	6" DOTTED YELLOW LINE EXTENSION (2' DASH, 6' GAP)
	12" DWCEX	12" DOTTED WHITE CIRCULATORY EXTENSION (2' DASH, 2' GAP)

ABBREVIATIONS

GENERAL	
AADT	ANNUAL AVERAGE DAILY TRAFFIC
ABAN	ABANDON
ADJ	ADJUST
APPROX.	APPROXIMATE
A.C.	ASPHALT CONCRETE
ACCM PIPE	ASPHALT COATED CORRUGATED METAL PIPE
BIT.	BITUMINOUS
BC	BOTTOM OF CURB
BD.	BOUND
BL	BASELINE
BLDG	BUILDING
BM	BENCHMARK
BO	BY OTHERS
BOS	BOTTOM OF SLOPE
BR.	BRIDGE
CB	CATCH BASIN
CB CI	CATCH BASIN WITH CURB INLET
CC	CEMENT CONCRETE
CCM	CEMENT CONCRETE MASONRY
CEM	CEMENT
CI	CURB INLET
CIP	CAST IRON PIPE
CLF	CHAIN LINK FENCE
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CSP	CORRUGATED STEEL PIPE
CO.	COUNTY
CONC	CONCRETE
CONST	CONTINUOUS
CR GR	CONSTRUCTION
DHV	CROWN GRADE
DI	DESIGN HOURLY VOLUME
DIA	DROP INLET
DIP	DIAMETER
DW	DUCTILE IRON PIPE
DWY	STEADY DON'T WALK - PORTLAND ORANGE DRIVEWAY
ELEV (or EL.)	ELEVATION
EMB	EMBANKMENT
EOP	EDGE OF PAVEMENT
EXIST (or EX)	EXISTING
EXC	EXCAVATION
F&C	FRAME AND COVER
F&G	FRAME AND GRATE
FDN.	FOUNDATION
FLDSTN	FIELDSTONE
GAR	GARAGE
GD	GROUND
GG	GAS GATE
GI	GUTTER INLET
GICI	GUTTER INLET WITH CURB INLET
GIP	GALVANIZED IRON PIPE
GR	GUARDRAIL
GRAN	GRANITE
GRAV	GRAVEL
GRD	GUARD
HDW	HEADWALL
HMA	HOT MIX ASPHALT
HOR	HORIZONTAL
HYD	HYDRANT
INV	INVERT
JCT	JUNCTION
L	LENGTH OF CURVE
LB	LEACH BASIN
LO	LAYOUT
LP	LIGHT POLE
LT	LEFT
MAX	MAXIMUM
MB	MAILBOX
MH	MANHOLE
MHB	MASSACHUSETTS HIGHWAY BOUND
MIN	MINIMUM
NIC	NOT IN CONTRACT
NO.	NUMBER
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
P.G.L.	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
POC	POINT ON CURVE
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVATURE
PROJ	PROJECT
PROP	PROPOSED
PSB	PLANTABLE SOIL BORROW
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION

MENDON
ROUTE 16

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	2	57
PROJECT FILE NO. N/A (ACCESS PERMIT)			

LEGEND & ABBREVIATIONS

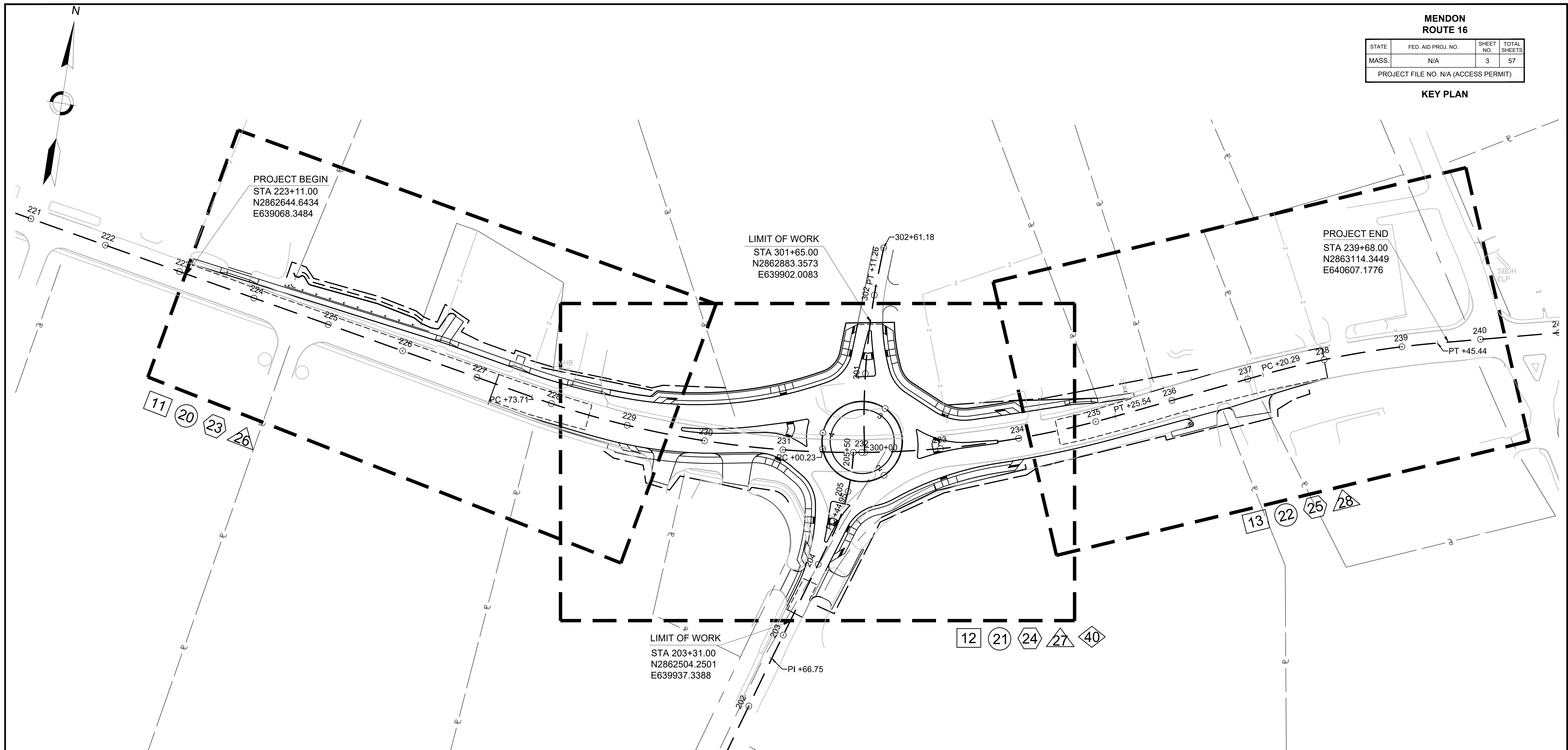
ABBREVIATIONS (cont.)

GENERAL	
PVT	POINT OF VERTICAL TANGENCY
PVMT	PAVEMENT
PWW	PAVED WATER WAY
R	RADIUS OF CURVATURE
R&D	REMOVE AND DISPOSE
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
RDWY	ROADWAY
REM	REMOVE
RET	RETAIN
RET WALL	RETAINING WALL
ROW	RIGHT OF WAY
RR	RAILROAD
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
RT	RIGHT
SB	STONE BOUND
SHLD	SHOULDER
SLCB	STREET LIGHT CONTROL BOX
SMH	SEWER MANHOLE
ST	STREET
STA	STATION
SSD	STOPPING SIGHT DISTANCE
SHLO	STATE HIGHWAY LAYOUT LINE
SW	SIDEWALK
SUP	SHARED USE PATH
T	TANGENT DISTANCE OF CURVE/TRUCK %
TAN	TANGENT
TEMP	TEMPORARY
TC	TOP OF CURB
TOS	TOP OF SLOPE
TYP	TYPICAL
UP	UTILITY POLE
VAR	VARIABLES
VERT	VERTICAL
VC	VERTICAL CURVE
WCR	WHEEL CHAIR RAMP
WG	WATER GATE
WIP	WROUGHT IRON PIPE
WM	WATER METER/WATER MAIN
X-SECT	CROSS SECTION
TRAFFIC SIGNAL ABBREVIATIONS	
CAB	CABINET
CCVE	CLOSED CIRCUIT VIDEO EQUIPMENT
DW	STEADY UPRAISED HAND
FDW	FLASHING UPRAISED HAND
FR	FLASHING CIRCULAR RED
FRL	FLASHING RED LEFT ARROW
FRR	FLASHING RED RIGHT ARROW
FY	FLASHING CIRCULAR YELLOW
FYL	FLASHING YELLOW LEFT ARROW
FYR	FLASHING YELLOW RIGHT ARROW
G	STEADY CIRCULAR GREEN
GL	STEADY GREEN LEFT ARROW
GR	STEADY GREEN RIGHT ARROW
GSL	STEADY GREEN SLASH LEFT ARROW
GSR	STEADY GREEN SLASH RIGHT ARROW
GV	STEADY GREEN VERTICAL ARROW
OL	OVERLAP
PED	PEDESTRIAN
PTZ	PAN, TILT, ZOOM
R	STEADY CIRCULAR RED
RL	STEADY RED LEFT ARROW
RR	STEADY RED RIGHT ARROW
TR SIG	TRAFFIC SIGNAL
TSC	TRAFFIC SIGNAL CONDUIT
W	STEADY WALKING PERSON
Y	STEADY CIRCULAR YELLOW
YL	STEADY YELLOW LEFT ARROW

**MENDON
ROUTE 16**

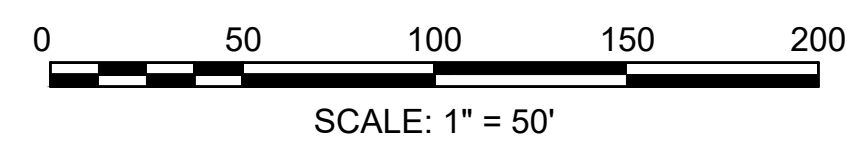
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	3	57
PROJECT FILE NO. N/A (ACCESS PERMIT)			

KEY PLAN



**KEY PLAN
LEGEND**

- # CONSTRUCTION PLANS
- # CURB TIE & GRADING PLANS (PRODUCED AT NEXT SUBMISSION)
- # DRAINAGE & UTILITY PLANS
- # TRAFFIC SIGN & PAVEMENT MARKING PLANS
- # LIGHTING PLANS



MENDON
ROUTE 16

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MASS.	N/A	4	57
PROJECT FILE NO. N/A (ACCESS PERMIT)			

GENERAL NOTES

GENERAL NOTES

1. WHERE THE NEW CONSTRUCTION COINCIDES WITH PRESENT TRAVELED WAYS, THE CONTRACTOR SHALL PERFORM THEIR WORK IN A MANNER ACCEPTABLE TO THE ENGINEER SO THAT INTERFERENCE TO BUSINESS CONCERNS AND ABUTTERS, ON ACCOUNT OF THE CONSTRUCTION WORK, IS KEPT TO A MINIMUM. THE CONTRACTOR WILL NOT BE ALLOWED TO PARK EQUIPMENT OR STOCKPILE MATERIAL ON THE TRAVELED WAYS OVERNIGHT OR WHEN NOT IN USE. THE CONTRACTOR SHALL MAINTAIN SAFE AND REASONABLE ACCESS TO AND FROM ABUTTING PROPERTIES AT ALL TIMES AT NO ADDITIONAL COST.
2. THE CONTRACTOR SHALL EXCAVATE TEST PITS TO VERIFY LOCATIONS OF EXISTING UTILITIES AS INDICATED OR AS DIRECTED BY THE ENGINEER.
3. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE UTILITY COMPANIES DOING WORK IN THE SAME AREA. THE CONTRACTOR SHALL ALLOW THE UTILITY COMPANIES AND THEIR REPRESENTATIVES TO INSTALL THEIR SYSTEMS WITHIN MASSDOT AND/OR TOWN OWNED STREETS AND EASEMENTS.
4. THE CONTRACTOR'S ATTENTION IS DIRECTED TO EXISTING LABELED SEWER MANHOLE OR DRAINAGE MANHOLE COVERS SHOWN ON THE PLANS AS THEY MAY NOT ACCURATELY REPRESENT THE UNDERGROUND SERVICE. PRIOR TO ANY WORK THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF AN EXISTING COVER NOT ACCURATELY REPRESENTING THE SERVICE BELOW.
5. NO EXISTING PUBLIC UTILITY STRUCTURES SHALL BE ABANDONED AND/OR DISMANTLED WITHOUT AUTHORIZATION FROM THE ENGINEER.
6. THE CONTRACTOR SHALL PROVIDE METHODS DURING DEWATERING OPERATIONS AND FOR STORM WATER RUNOFF NOT TO ALLOW SILT OR DEBRIS TO ENTER EXISTING DRAINAGE FACILITIES OR CREATE NUISANCES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING EXISTING OR NEW FACILITIES IF SILTATION OCCURS DUE TO THE CONTRACTOR'S OPERATIONS.
7. FINAL LOCATION OF TRAFFIC SIGNS AND SUPPORTS SHALL BE SHOWN ON THE TRAFFIC PLAN AND MAY, IF NECESSARY, AT DISCRETION OF THE ENGINEER, BE MODIFIED IN THE FIELD AS APPROPRIATE.
8. DETAILS FOR SIGN SUPPORTS SHALL BE IN ACCORDANCE WITH MASSDOT STANDARD DRAWINGS.
9. DAMAGE OF PROPERTY BEYOND THE WORK LIMITS CAUSED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE, SUBJECT TO THE APPROVAL OF THE ENGINEER AND ACCEPTANCE OF THE PROPERTY OWNER.
10. THE CONTRACTOR SHALL DISPOSE OF ALL WASTE MATERIAL IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS AT THEIR OWN EXPENSE IF NOT OTHERWISE SPECIFIED, OUTSIDE OF THE PROJECT LIMITS.
11. ALL EXISTING MUNICIPAL AND PRIVATE UTILITY CASTINGS SUCH AS WATER BOXES, CURB STOPS, MANHOLE FRAMES AND COVERS, CATCH BASIN FRAME AND GRATES AND OTHER CASTINGS SHALL BE ADJUSTED BY THE CONTRACTOR TO LINE AND GRADE AS DIRECTED BY THE ENGINEER UNLESS OTHERWISE SPECIFIED IN THE SPECIAL PROVISIONS OR ON THE CONTRACT PLANS
12. THE CONTRACTOR SHALL PROVIDE ACCESS TO ALL UTILITIES THROUGHOUT THE PROJECT SO THAT THE VARIOUS UTILITY OWNERS HAVE ACCESS TO VAULTS AND MANHOLES TO OPERATE VALVES AND OTHER CONTROLS ON THEIR SYSTEM.
13. THE LOCATIONS OF PROPOSED PIPELINES, STRUCTURES AND UTILITY RELOCATIONS MAY BE MODIFIED TO SUIT FIELD CONDITIONS AT THE DISCRETION OF THE ENGINEER.
14. OFFSETS TO CATCH BASINS ARE TO THE CENTER OF THE GRATE AT FACE OF CURB.
15. IF THE CONTRACTOR DAMAGES UTILITY SERVICES, THEY SHALL IMMEDIATELY NOTIFY THE RESPECTIVE UTILITY COMPANY AND SHALL IMMEDIATELY REPLACE OR REPAIR, UNLESS INDICATED OTHERWISE BY THE RESPECTIVE UTILITY OWNER.
16. ALL PROPOSED DRAINAGE CONNECTIONS TO EXISTING STRUCTURES WILL BE INCLUDED IN THE COST OF INSTALLATION OF THE NEW PIPE OR STRUCTURE.
17. RIM ELEVATIONS MAY BE SUBJECT TO FIELD ADJUSTMENTS AS DIRECTED BY THE ENGINEER. ELEVATIONS ON CATCH BASINS ARE REFERENCED TO THE CENTER OF GRATE AT FACE OF CURB.
18. WHERE WATERLINES, DRAINAGE PIPES OR STRUCTURES ARE ABANDONED IN PLACE, CONTRACTOR SHALL MAKE SURE THAT ALL CONNECTING PIPES, INLETS AND OUTLETS ARE PLUGGED. ALL LIVE CONNECTIONS SHALL BE CONNECTED TO THE NEW SYSTEM.
19. WHEN A PROPOSED CATCH BASIN INTERFERES WITH ANY UNDERGROUND UTILITY, A GUTTER INLET SHALL BE USED.
20. ALL WHEELCHAIR RAMPS SHALL CONFORM TO THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD (AAB) RULES AND REGULATIONS AND THE AMERICANS WITH DISABILITIES ACT (ADA) GUIDELINES. SEE LATEST MASSDOT CONSTRUCTION STANDARDS.

SURVEY NOTES

1. THIS PLAN WAS PREPARED FROM AN ACTUAL ON THE GROUND SURVEY CONDUCTED BY GUERRIERE & HALNON, INC. BETWEEN JULY - SEPTEMBER, 2018.
2. THE HORIZONTAL DATUM SHOWN HEREON REFERENCES THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM, MAINLAND ZONE, NAD83 (2011) EPOCH 2010.0 IN US SURVEY FOOT.
3. THE VERTICAL DATUM SHOWN HEREON REFERENCES NAVD88, GEOID 12B.
4. THE UNDERGROUND UTILITY INFORMATION SHOWN HEREON LABELED WITH AN (R) ARE FROM RECORD DOCUMENTS. THE LOCATION OF THE UTILITIES AS SHOWN HEREON HAVE BEEN COMPILED FROM VISIBLE STRUCTURES AND INFORMATION OBTAINED FROM VARIOUS SOURCES. THE ACTUAL LOCATION OF ALL UTILITIES AND UNDERGROUND STRUCTURES SHALL BE CONSIDERED APPROXIMATE AND SHALL BE VERIFIED BY THE OWNER PRIOR TO ANY CONSTRUCTION. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICES OR IN ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED.
5. BEFORE DESIGNING FUTURE CONNECTIONS, THE APPROPRIATE UTILITIES MUST BE CONSULTED. BEFORE CONSTRUCTION, ALL UTILITIES, PUBLIC AND PRIVATE, MUST BE NOTIFIED (SEE MASSACHUSETTS GENERAL LAWS, CHAPTER 82 SECTION 40.) CALL "DIG SAFE" 1(888) 344-7233 [HTTP://WWW.DIGSAFE.COM](http://www.digsafe.com)

**MENDON
ROUTE 16**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	5	57
PROJECT FILE NO. N/A (ACCESS PERMIT)			

TYPICAL SECTIONS

PROPOSED FULL DEPTH PAVEMENT

- SURFACE: 1 1/2" SUPERPAVE SURFACE COURSE -12.5 POLYMER (SSC-12.5-P) OVER ASPHALT EMULSION FOR TACK COAT
- INTERMEDIATE: 2 1/2" SUPERPAVE INTERMEDIATE COURSE -19.0 (SIC-19.0) OVER ASPHALT EMULSION FOR TACK COAT
- BASE: 3 1/2" SUPERPAVE BASE COURSE -37.5 (SBC-37.5) OVER
- SUBBASE: 4" DENSE GRADED CRUSHED STONE FOR SUB-BASE OVER 8" GRAVEL BORROW (TYPE b)

PROPOSED PAVEMENT STANDARD MILLING & OVERLAY

- SURFACE: 1 1/2" SUPERPAVE SURFACE COURSE -12.5 POLYMER (SSC-12.5-P) OVER ASPHALT EMULSION FOR TACK COAT
- MILLING: 1 1/2" PAVEMENT STANDARD MILLING

PROPOSED PAVEMENT WIDENING - LESS THAN 4'-0" WIDE

- SURFACE: 1 1/2" SUPERPAVE SURFACE COURSE -12.5 POLYMER (SSC-12.5-P) OVER ASPHALT EMULSION FOR TACK COAT
- INTERMEDIATE: 2 1/2" SUPERPAVE INTERMEDIATE COURSE -19.0 (SIC-19.0) OVER ASPHALT EMULSION FOR TACK COAT
- BASE: 8" HIGH EARLY STRENGTH CEMENT CONCRETE OVER
- SUBBASE: 8" GRAVEL BORROW (TYPE b)

PROPOSED CEMENT CONCRETE ISLANDS AND WCRs

- SURFACE: 4" CEMENT CONCRETE (AIR-ENTRAINED 4000 PSI, 3/4", 610 LBS) OVER
- SUBBASE: 8" GRAVEL BORROW (TYPE b)

PROPOSED HMA DRIVEWAY

- SURFACE: 1 1/2" SUPERPAVE SURFACE COURSE -12.5 (SSC-12.5) OVER ASPHALT EMULSION FOR TACK COAT
- INTERMEDIATE: 2 1/2" SUPERPAVE INTERMEDIATE COURSE -19.0 (SIC-19.0) OVER
- SUBBASE: 8" GRAVEL BORROW (TYPE b)

PROPOSED HMA SHARED USE PATH

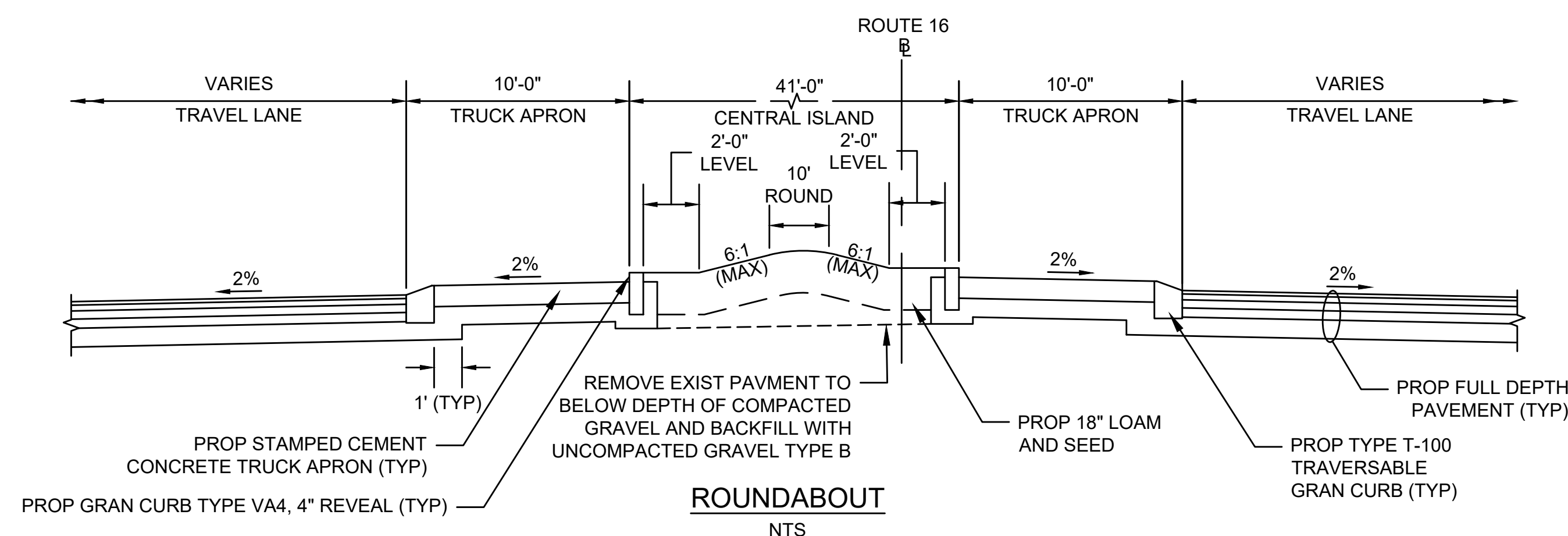
- SURFACE: 1 1/2" SUPERPAVE SURFACE COURSE -9.5 (SSC-9.5) OVER ASPHALT EMULSION FOR TACK COAT

- INTERMEDIATE: 2 1/2" SUPERPAVE INTERMEDIATE COURSE -19.0 (SIC-19.0) OVER
- SUBBASE: 8" GRAVEL BORROW (TYPE b)

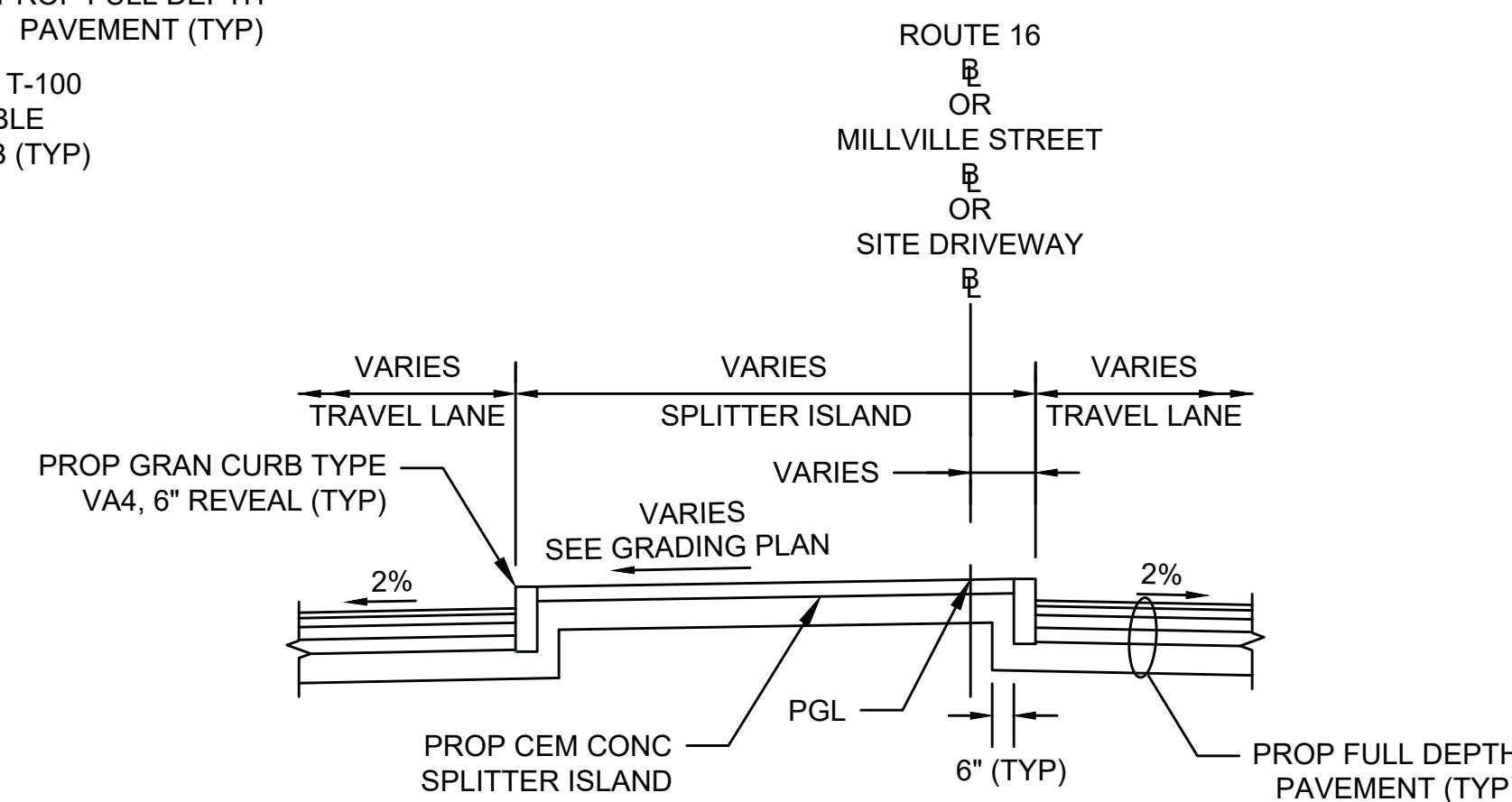
PROPOSED HMA SIDEWALK

- SURFACE: 1 1/4" SUPERPAVE SURFACE COURSE -9.5 (SSC-9.5) OVER ASPHALT EMULSION FOR TACK COAT

- INTERMEDIATE: 1 3/4" SUPERPAVE INTERMEDIATE COURSE -12.5 (SIC-12.5) OVER
- SUBBASE: 8" GRAVEL BORROW (TYPE b)

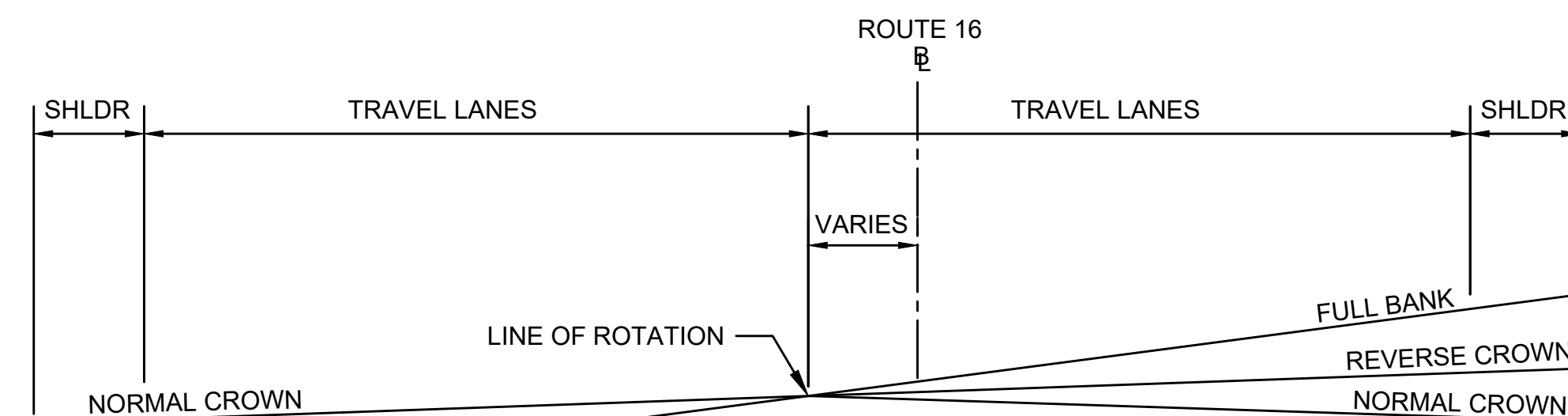


ROUNDABOUT
NTS

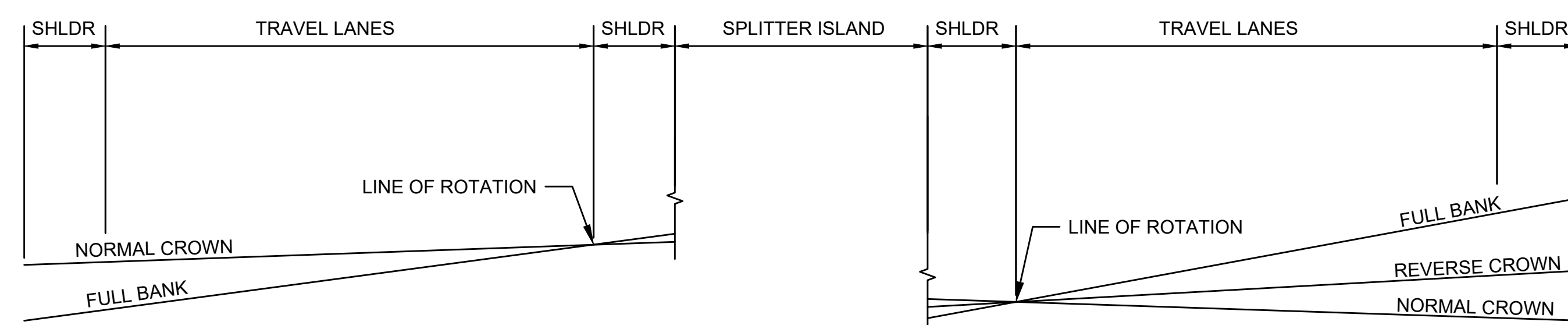


SPLITTER ISLANDS

ROUTE 16 STA 229+68 ± TO STA 231+35 ±
ROUTE 16 STA 232+70 ± TO STA 233+74 ±
MILLVILLE STREET STA 204+24 ± TO STA 204+80 ±
SITE DRIVEWAY STA 300+95 ± TO STA 301+56 ±
NTS



METHOD OF BANKING
NTS



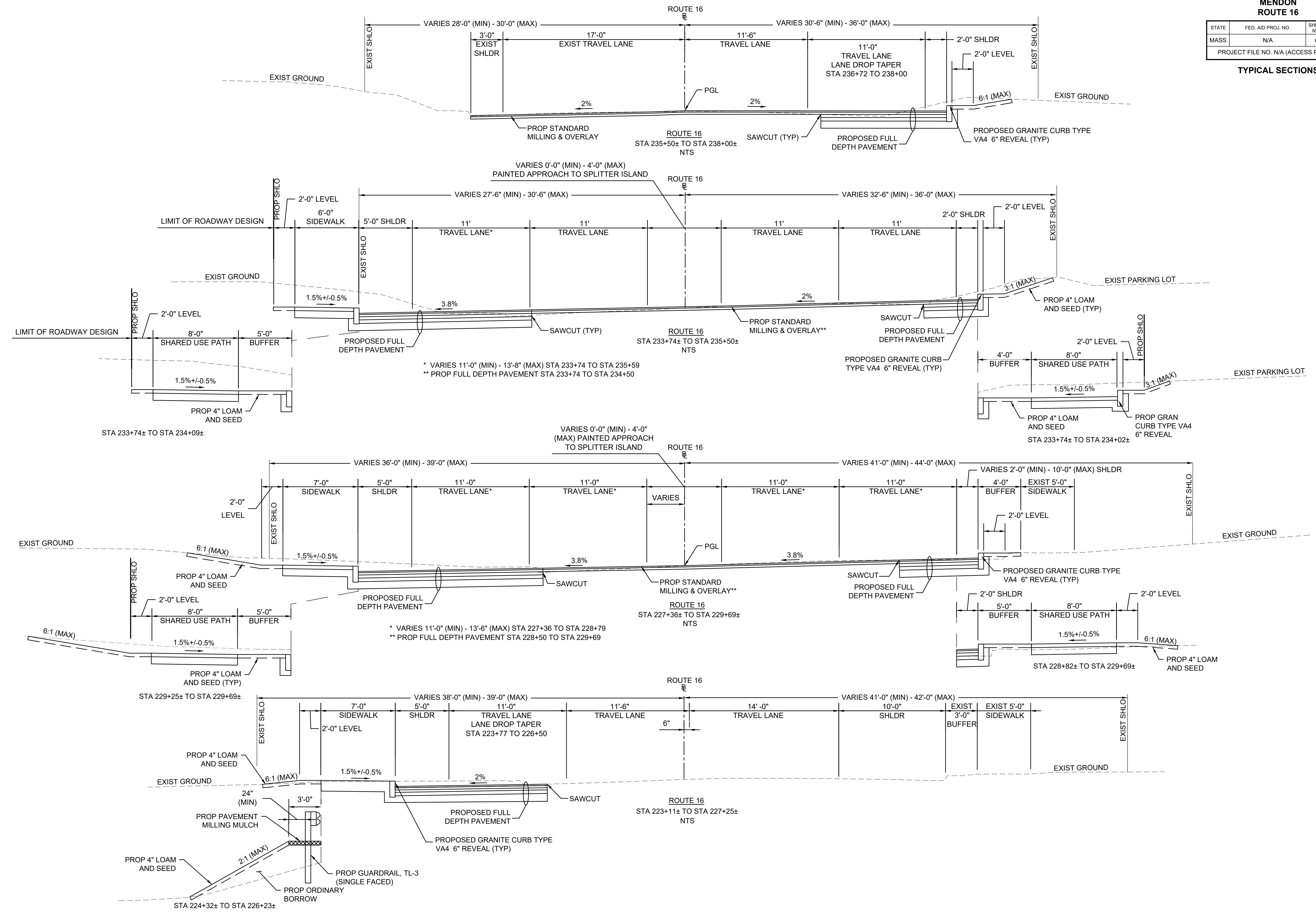
METHOD OF BANKING AT SPLITTER ISLANDS
NTS

**MENDON
ROUTE 16**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	6	57

PROJECT FILE NO. N/A (ACCESS PERMIT)

TYPICAL SECTIONS

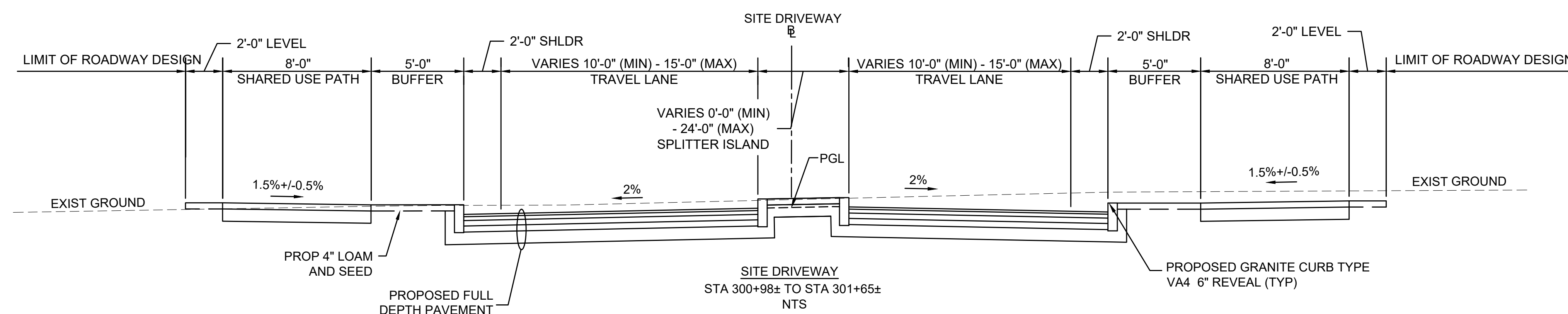
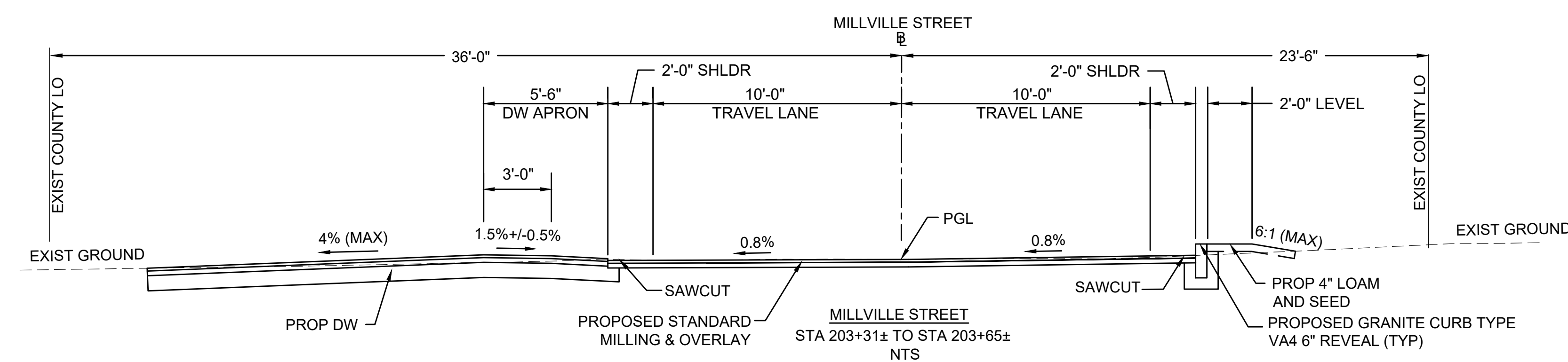
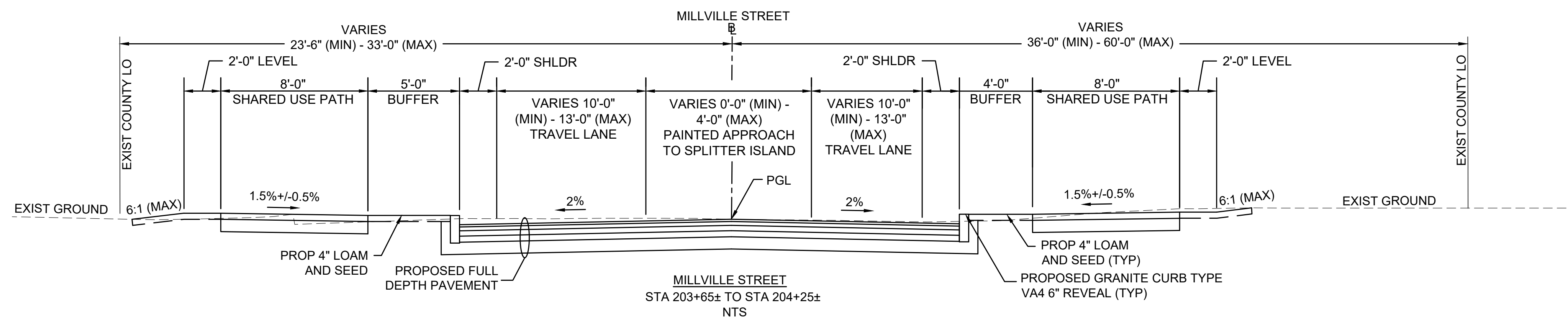


MENDON
ROUTE 16

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	7	57

PROJECT FILE NO. N/A (ACCESS PERMIT)

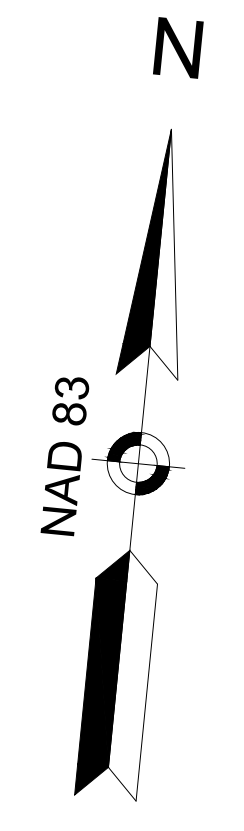
TYPICAL SECTIONS



**MENDON
ROUTE 16**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	8	57
PROJECT FILE NO. N/A (ACCESS PERMIT)			

CONSTRUCTION BASELINE TIE PLANS
SHEET 1 OF 3



N/F
QUIRK FAMILY
REALTY TRUST
BK/PG 36183/97
PB/PL 311/30
(PARCEL IV)
9 UXBRIDGE ROAD
PID 11-236-9

N/F
D. FRANCIS MURPHY
INSURANCE AGENCY INC.
BK/PG 29401/60
PB/PL 792/82
1 UXBRIDGE ROAD
PID 11-236-1

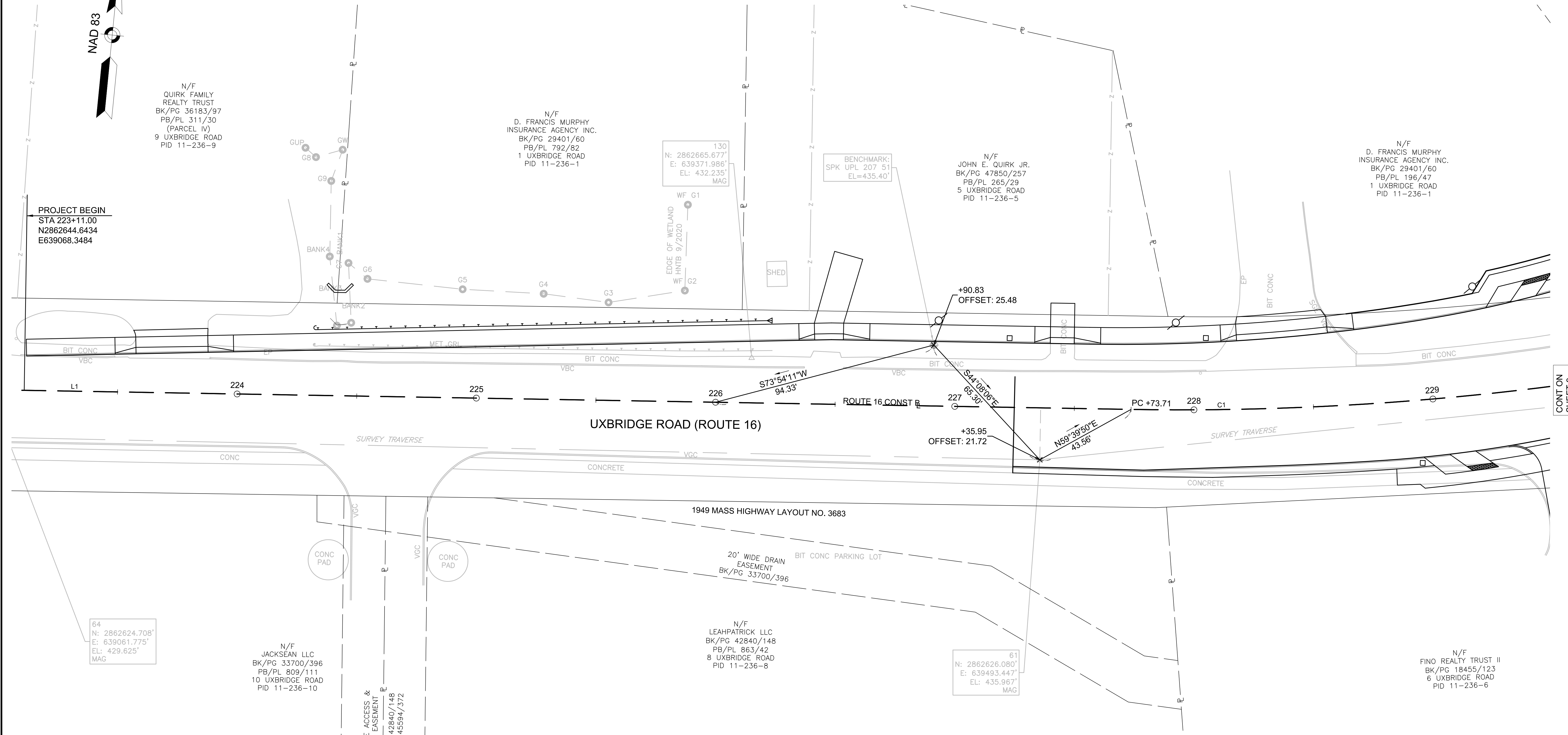
130
N: 2862665.677'
E: 639371.986'
EL: 432.235'
MAG

BENCHMARK:
SPK UPL 207 51
EL=435.40'

N/F
JOHN E. QUIRK JR.
BK/PG 47850/257
PB/PL 265/29
5 UXBRIDGE ROAD
PID 11-236-5

N/F
D. FRANCIS MURPHY
INSURANCE AGENCY INC.
BK/PG 29401/60
PB/PL 196/47
1 UXBRIDGE ROAD
PID 11-236-1

PROJECT BEGIN
STA 223+11.00
N2862644.6434
E639068.3484



64
N: 2862624.708'
E: 639061.775'
EL: 429.625'
MAG

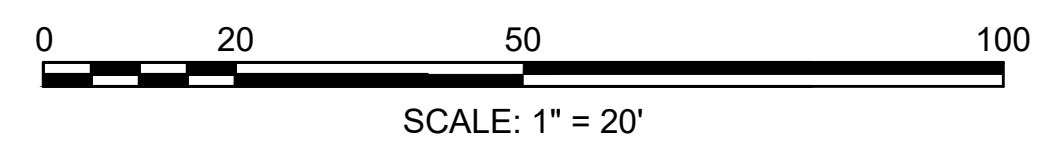
N/F
JACKSEAN LLC
BK/PG 33700/396
PB/PL 809/111
10 UXBRIDGE ROAD
PID 11-236-10

35' WIDE ACCESS &
UTILITY EASEMENT
BK/PG 42840/148
BK/PG 45594/372

N/F
LEAHPATRICK LLC
BK/PG 42840/148
PB/PL 863/42
8 UXBRIDGE ROAD
PID 11-236-8

61
N: 2862626.080'
E: 639493.447'
EL: 435.967'
MAG

N/F
FINO REALTY TRUST II
BK/PG 18455/123
6 UXBRIDGE ROAD
PID 11-236-6



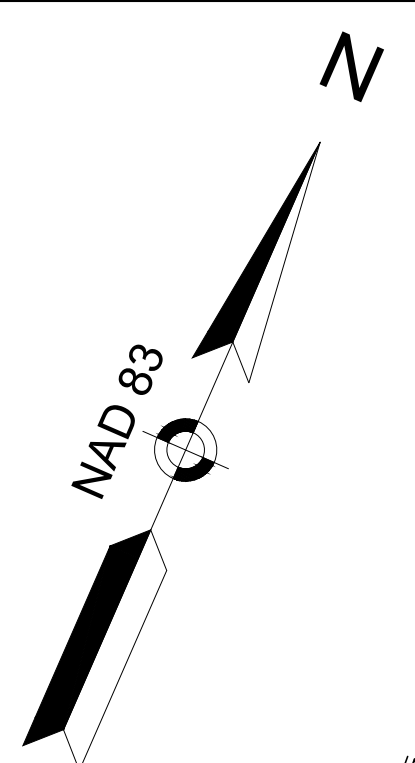
PROPOSED ROUTE 16 CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	215+27.28	2862638.8226	638284.6512		N89°34'28"E 1246.43'	227+73.71	2862648.0799	639531.0479
C1	227+73.71	2862648.0799	639531.0479	R=1220.00' Δ=35°18'31" L=751.83' T=388.28'		235+25.54	2862877.7303	640234.4996
L2	235+25.54	2862877.7303	640234.4996		N54°15'57"E 194.75'	237+20.29	2862991.4707	640392.5864
C2	237+20.29	2862991.4707	640392.5864	R=1185.00' Δ=10°53'10" L=225.15' T=112.91'		239+45.44	2863104.8624	640586.7009
L3	239+45.44	2863104.8624	640586.7009		N65°09'06"E 207.08'	241+52.51	2863191.8791	640774.6062

CONT ON
SHEET 9

**MENDON
ROUTE 16**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	9	57
PROJECT FILE NO. N/A (ACCESS PERMIT)			

CONSTRUCTION BASELINE TIE PLANS
SHEET 2 OF 3



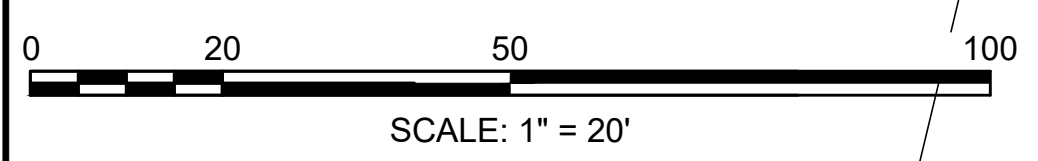
N/F
D. FRANCIS MURPHY
INSURANCE AGENCY INC.
BK/PG 29401/60
PB/PL 196/47
1 UXBRIDGE ROAD
PID 11-236-1

N/F
HASTINGS STREET PLAZA LLC
BK/PG 59891/137
PB/PL 304/25
37 HASTINGS STREET
PID 11-142-37

N/F
HASTING STREET PLAZA LLC
BK/PG 59891/137
PB/PL 304/25
35 HASTINGS STREET
PID 11-142-35

CONT ON
SHEET 8

CONT ON
SHEET 10



PROPOSED MILLVILLE STREET CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L4	202+80.66	2862454.2132	639931.8561		N6°15'18"E 164.28'	204+44.95	2862617.5177	639949.7551
C4	204+44.95	2862617.5177	639949.7551	R=266.94' Δ=22°32'54" L=105.05' T=53.22'		205+50.00	2862721.2597	639938.2568

PROPOSED SITE DRIVEWAY CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C5	300+00.00	2862726.2477	639951.7495	R=958.42' Δ=12°37'46" L=211.26' T=106.06'		302+11.26	2862928.7223	639892.9800
L5	302+11.26	2862928.7223	639892.9800		N8°24'32"W 49.93'	302+61.18	2862978.1113	639885.6790

PROPOSED ROUTE 16 CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	215+27.28	2862638.8226	638284.6512		N89°34'28"E 1246.43'	227+73.71	2862648.0799	639531.0479
C1	227+73.71	2862648.0799	639531.0479	R=1220.00' Δ=35°18'31" L=751.83' T=388.28'		235+25.54	2862877.7303	640234.4996
L2	235+25.54	2862877.7303	640234.4996		N54°15'57"E 194.75'	237+20.29	2862991.4707	640392.5864
C2	237+20.29	2862991.4707	640392.5864	R=1185.00' Δ=10°53'10" L=225.15' T=112.91'		239+45.44	2863104.8624	640586.7009
L3	239+45.44	2863104.8624	640586.7009		N65°09'06"E 207.08'	241+52.51	2863191.8791	640774.6062

PROPOSED ROUNDABOUT CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C3	1+00.23	2862712.0046	639900.1894	R=51.00' Δ=359°44'39" L=320.21' T=0.11'		4+20.44	2862712.2007	639900.0735

56
N: 2862683.751'
E: 639943.912'
EL: 448.204'
STN

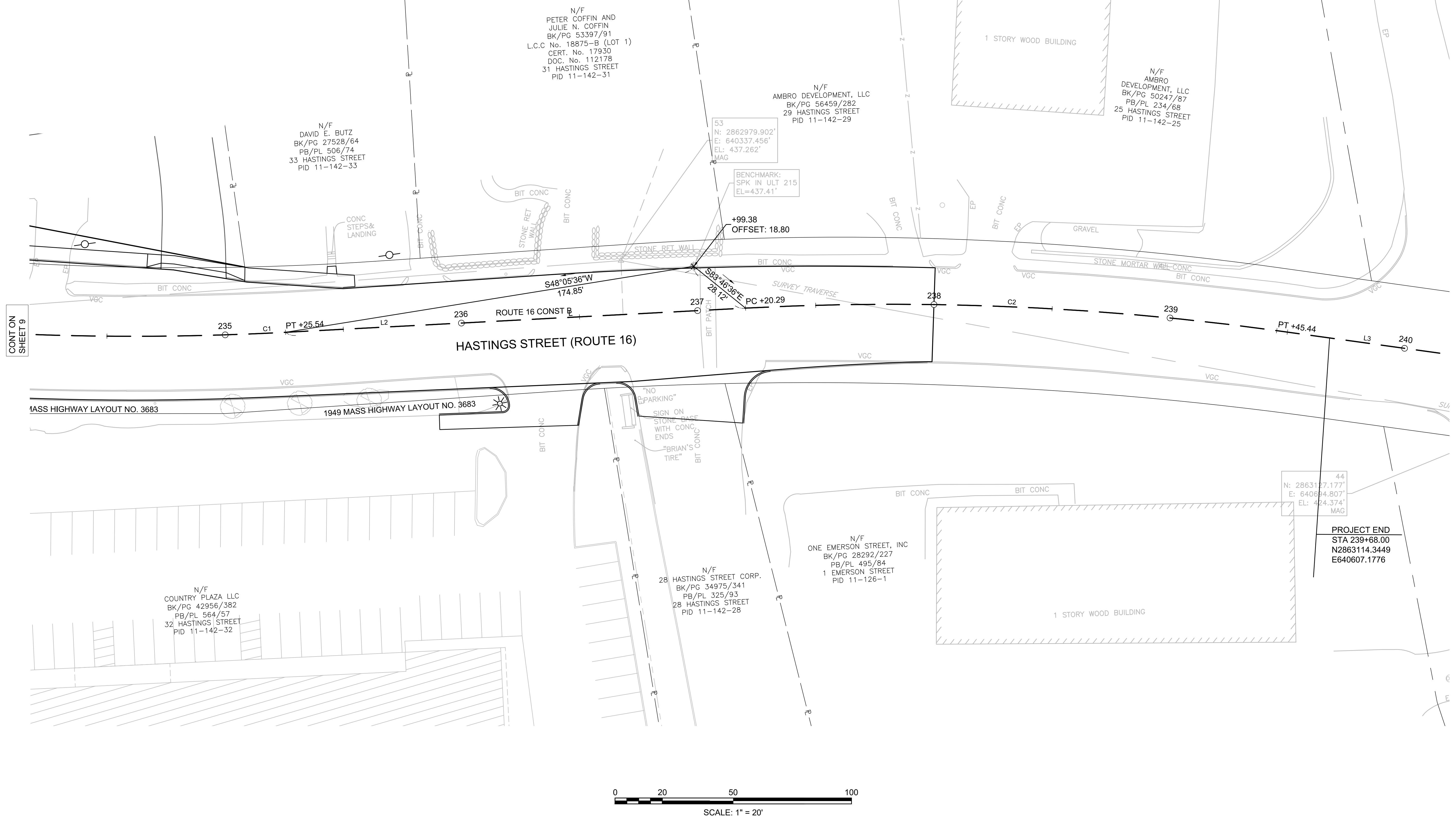
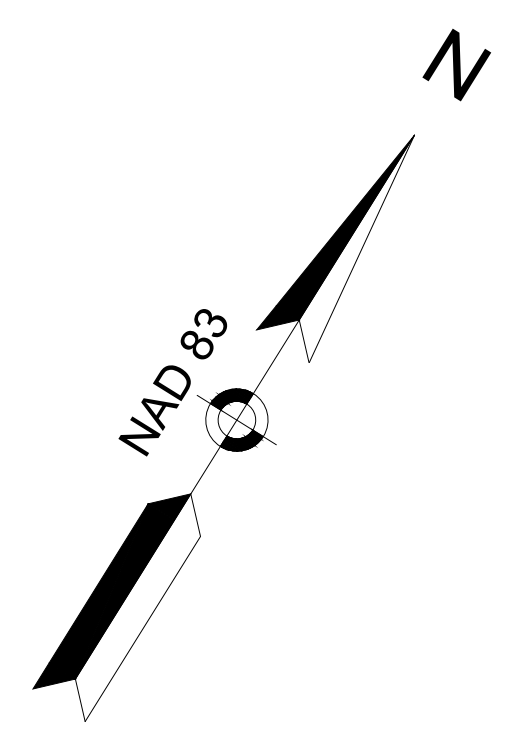
LIMIT OF WORK
STA 203+31.00
N2862504.2499
E639937.3404

**MENDON
ROUTE 16**

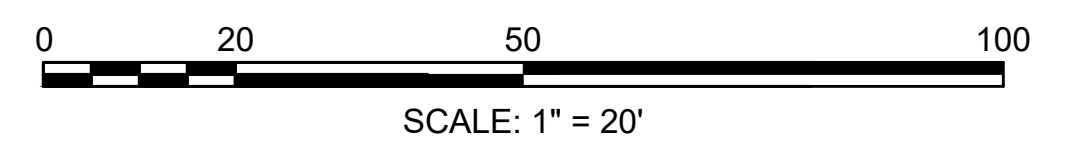
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	10	57

PROJECT FILE NO. N/A (ACCESS PERMIT)
CONSTRUCTION BASELINE TIE PLANS
SHEET 3 OF 3

PROPOSED ROUTE 16 CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	215+27.28	2862638.8226	638284.6512		N89°34'28"E 1246.43'	227+73.71	2862648.0799	639531.0479
C1	227+73.71	2862648.0799	639531.0479	R = 1220.00' Δ= 35°18'31" L=751.83' T=388.28'		235+25.54	2862877.7303	640234.4996
L2	235+25.54	2862877.7303	640234.4996		N54°15'57"E 194.75'	237+20.29	2862991.4707	640392.5864
C2	237+20.29	2862991.4707	640392.5864	R = 1185.00' Δ= 10°53'10" L=225.15' T=112.91'		239+45.44	2863104.8624	640586.7009
L3	239+45.44	2863104.8624	640586.7009		N65°09'06"E 207.08'	241+52.51	2863191.8791	640774.6062



CONT ON
SHEET 9



HIGHWAY GUARD DETAILS
 STA 224+31.66, 27.74' LT TO STA 224+41.12, 27.82' LT
 STA 224+41.66, 27.82' LT TO STA 226+10.61, 34.14' LT
 STA 226+10.61, 34.14' LT TO STA 226+23.30, 34.67' LT

TRAILING ANCHORAGE
 GUARDRAIL, TL-3 (SINGLE FACED)
 TANGENT END TREATMENT

TRAFFIC SIGNAL CONDUIT
 NONE

WATER SUPPLY ALTERATIONS
 SEE DRAINAGE & UTILITY PLANS

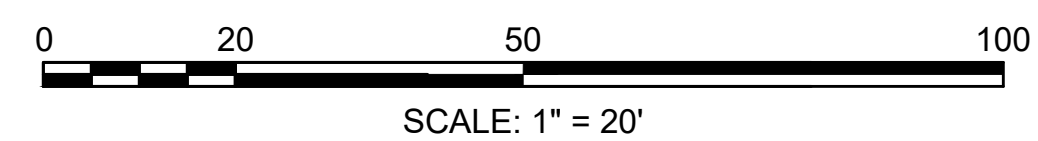
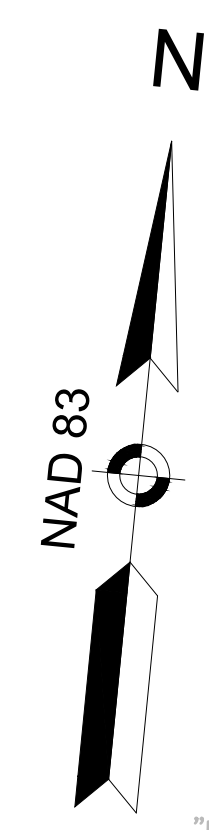
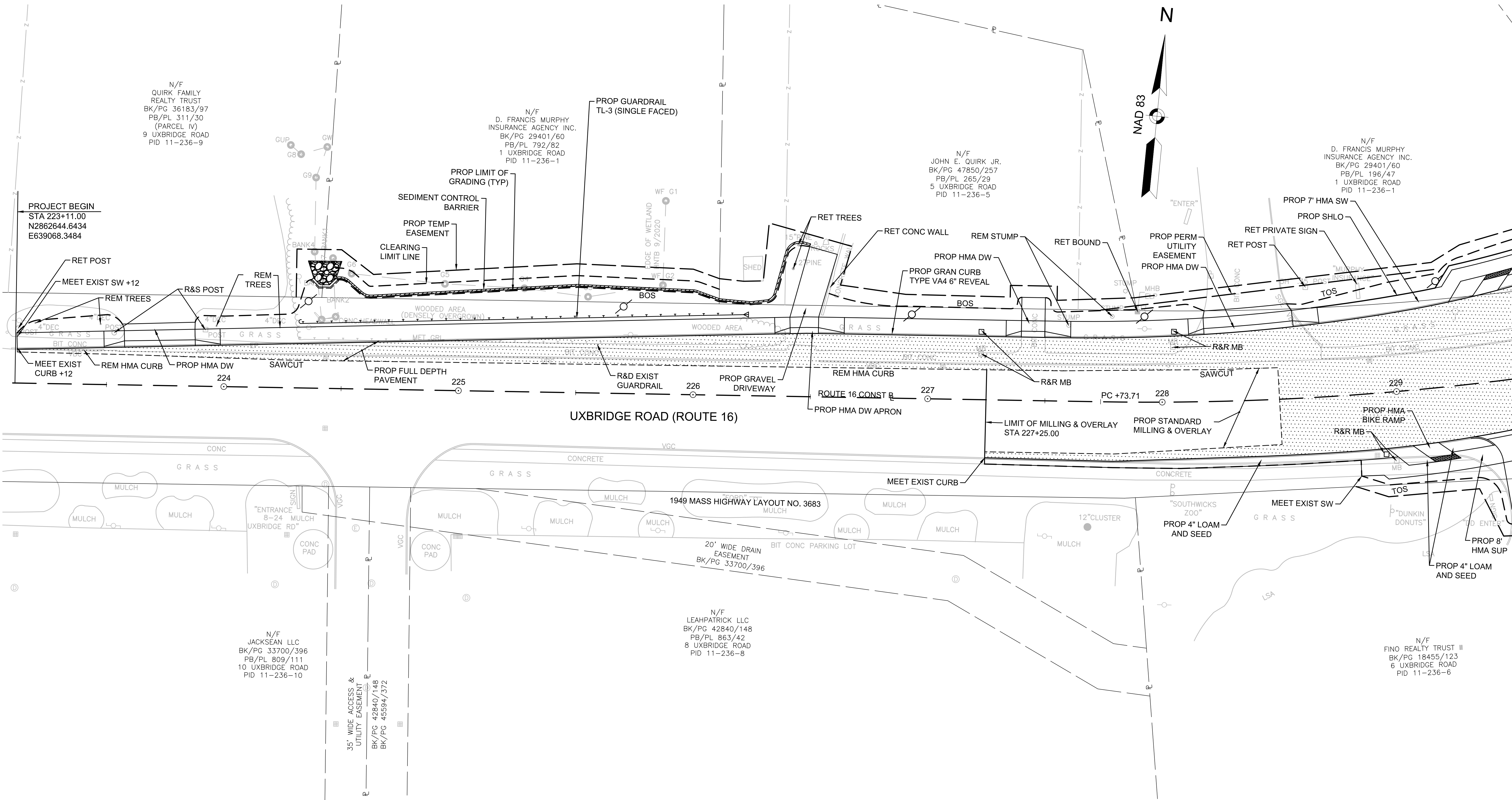
DRAINAGE DETAILS
 SEE DRAINAGE & UTILITY PLANS

MENDON
 ROUTE 16

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	11	57

PROJECT FILE NO. N/A (ACCESS PERMIT)

CONSTRUCTION PLANS
 SHEET 1 OF 3



FOR PROFILE: SEE SHEET NO. 14

CONT ON
 SHEET 12

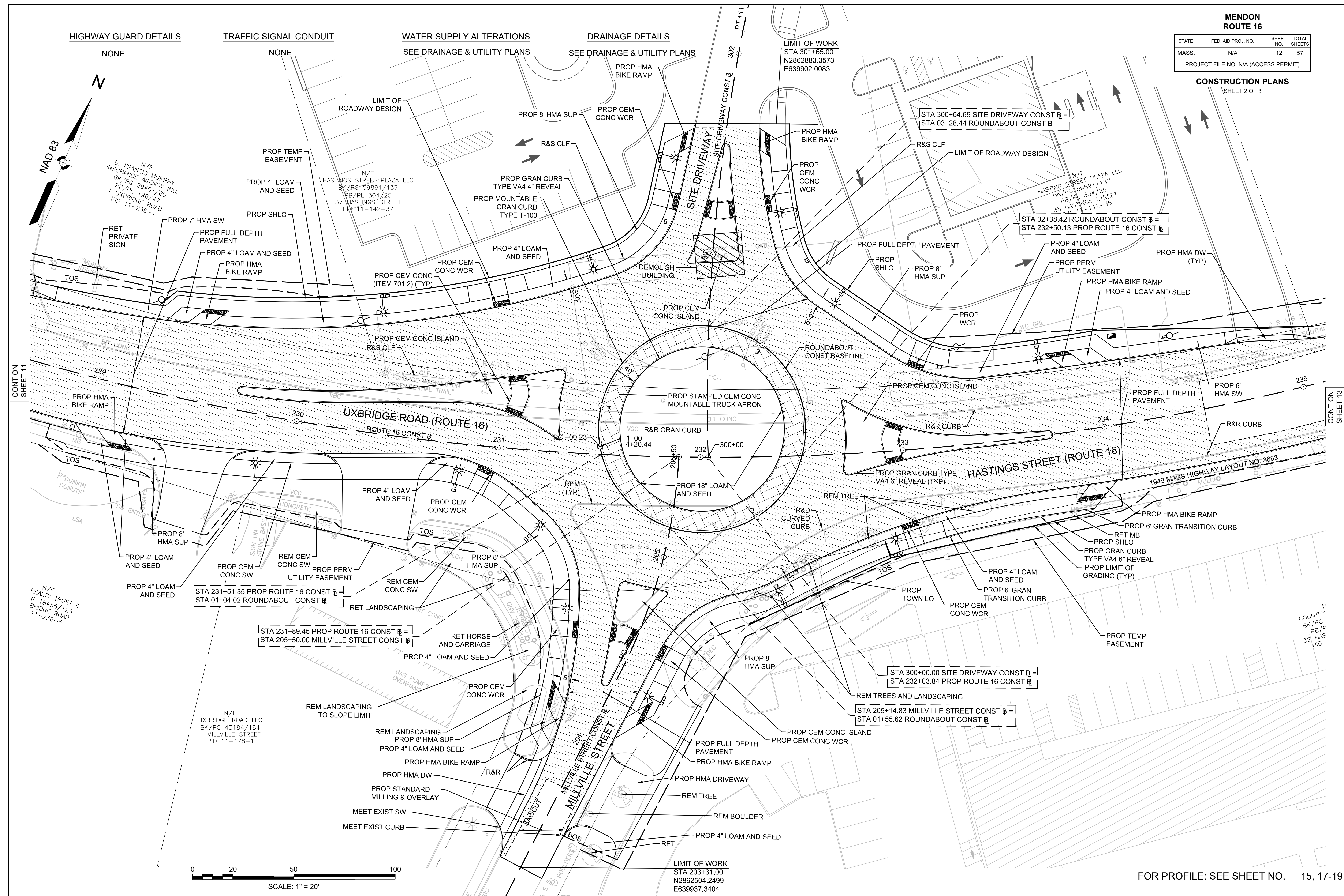
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**MENDON
ROUTE 16**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	12	57

PROJECT FILE NO. N/A (ACCESS PERMIT)

CONSTRUCTION PLANS
SHEET 2 OF 3



HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
SEE DRAINAGE & UTILITY PLANS

DRAINAGE DETAILS
SEE DRAINAGE & UTILITY PLANS

LIMIT OF WORK
STA 301+65.00
N2862883.3573
E639902.0083

CONT ON
SHEET 11

CONT ON
SHEET 13

N/F
REALTY TRUST II
18455/123
BRIDGE ROAD
11-236-6

N/F
D. FRANCIS MURPHY
INSURANCE AGENCY INC.
BK/PG 29401/60
PB/PL 196/47
1 UXBRIDGE ROAD
PID 11-236-1

N/F
HASTINGS STREET PLAZA LLC
BK/PG 59891/137
PB/PL 304/25
37 HASTINGS STREET
PID 11-142-37

N/F
HASTINGS STREET PLAZA LLC
BK/PG 59891/137
PB/PL 304/25
35 HASTINGS STREET
PID 11-142-35

N/F
UXBRIDGE ROAD LLC
BK/PG 43184/184
1 MILLVILLE STREET
PID 11-178-1

COUNTRY
BK/PG
PB/F
32 HAS
PID

LIMIT OF WORK
STA 203+31.00
N2862504.2499
E639937.3404

FOR PROFILE: SEE SHEET NO. 15, 17-19

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

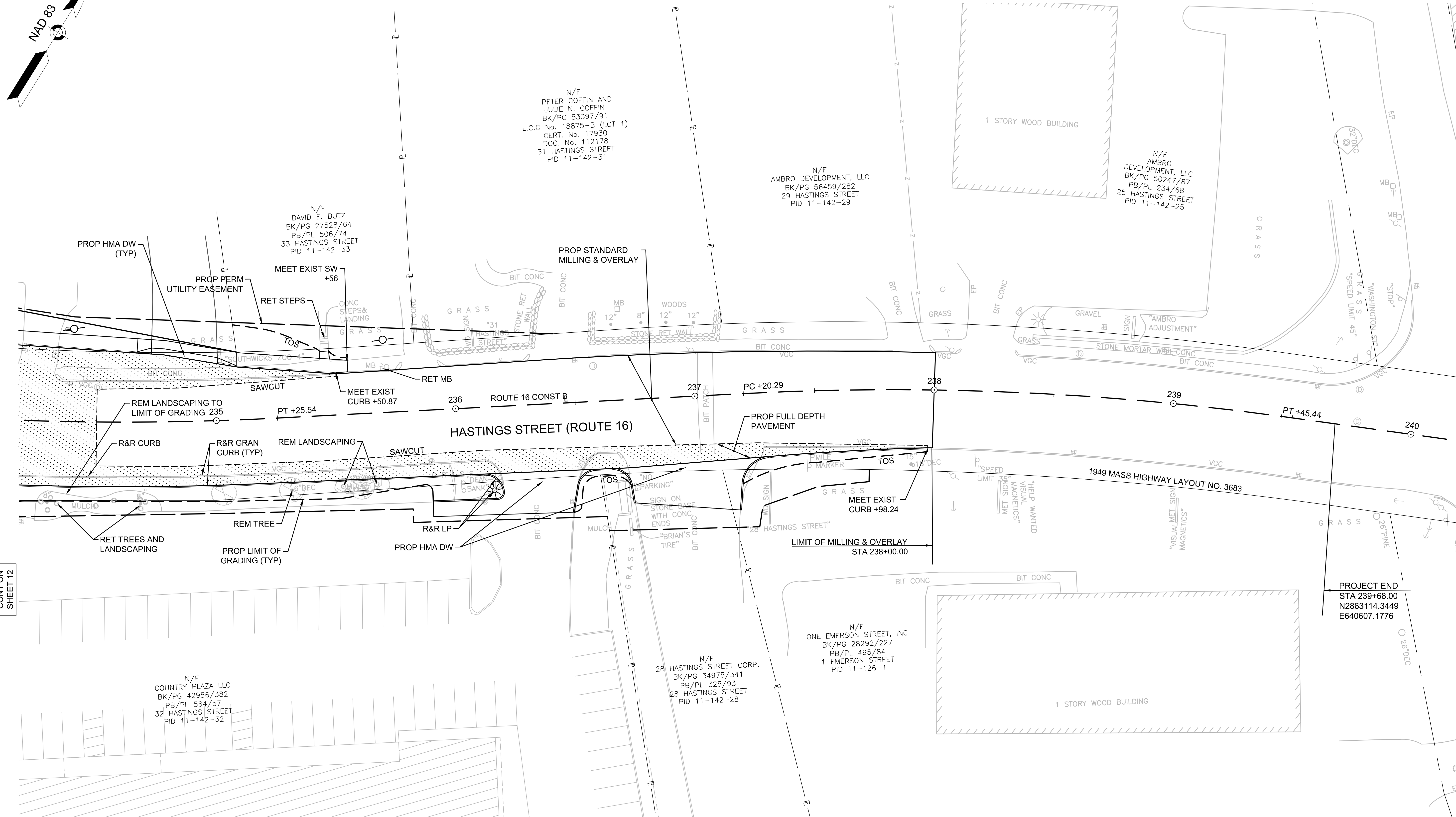
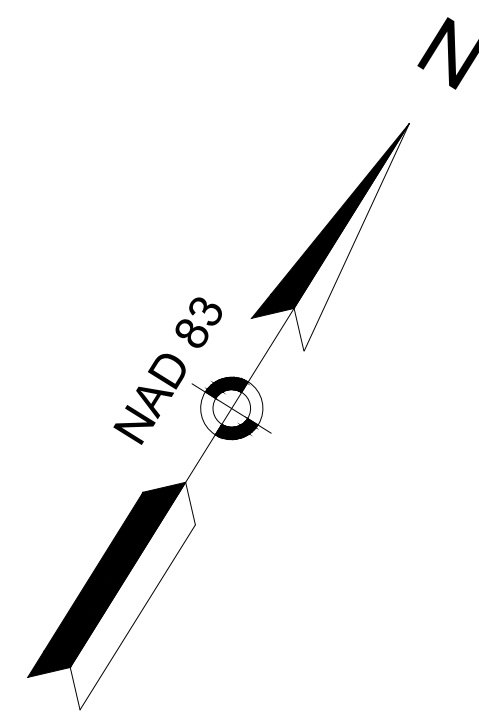
WATER SUPPLY ALTERATIONS
SEE DRAINAGE & UTILITY PLANS

DRAINAGE DETAILS
SEE DRAINAGE & UTILITY PLANS

**MENDON
ROUTE 16**

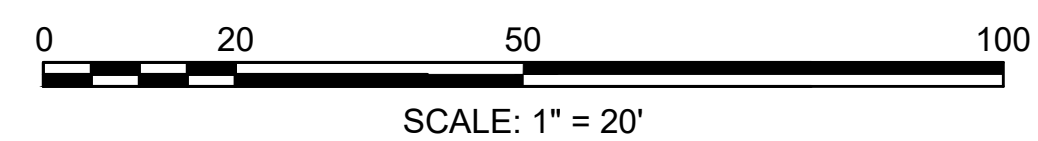
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	13	57

PROJECT FILE NO. N/A (ACCESS PERMIT)
CONSTRUCTION PLANS
SHEET 3 OF 3



CONT ON
SHEET 12

PROJECT END
STA 239+68.00
N2863114.3449
E640607.1776



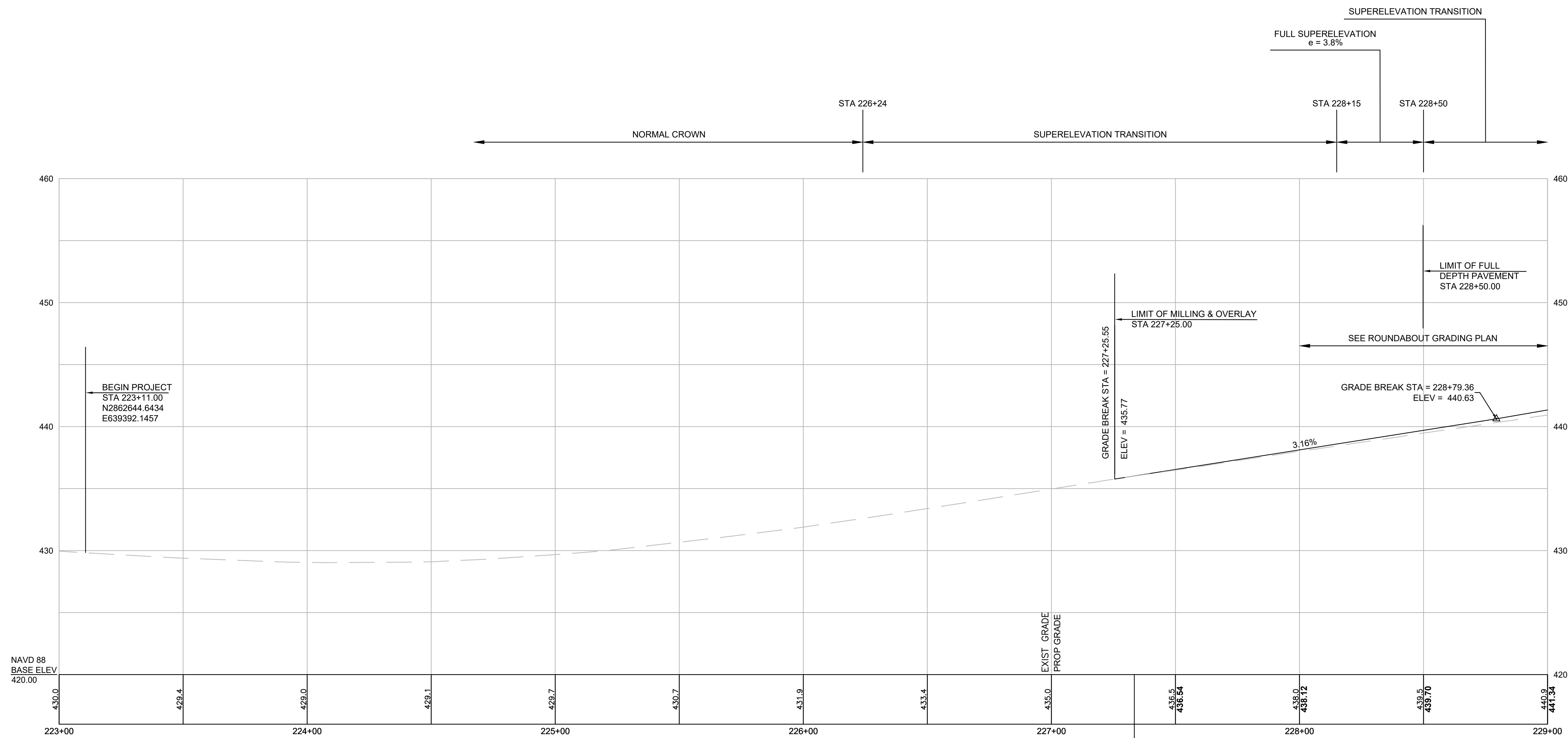
FOR PROFILE: SEE SHEET NO. 16

MENDON
ROUTE 16

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	14	57

PROJECT FILE NO. N/A (ACCESS PERMIT)
PROFILE - ROUTE 16
STA 223+00 TO STA 229+00

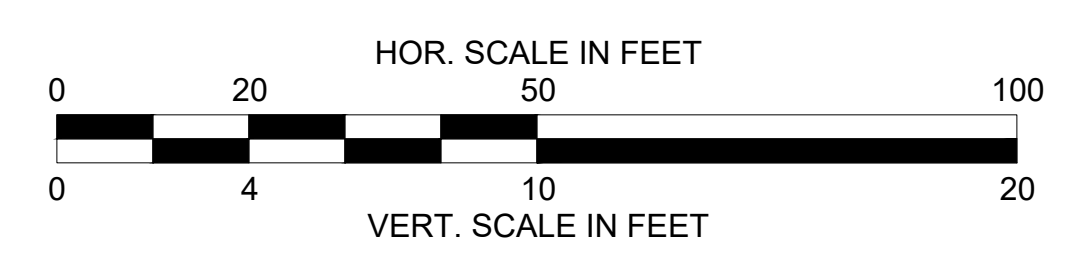
ROUTE 16



NAVD 88
BASE ELEV
420.00

BEGIN PROJECT
STA 223+11.00
N2862644.6434
E639392.1457

BM
MAG 61
N 2862626.0801
E 639493.4473
STA 227+35.96, 21.79' RT
ELEV: 435.967



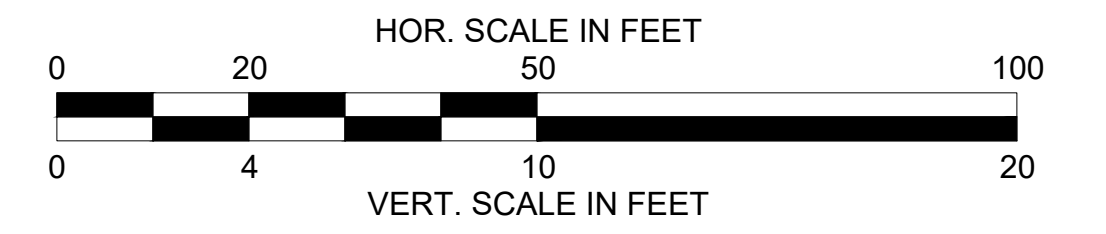
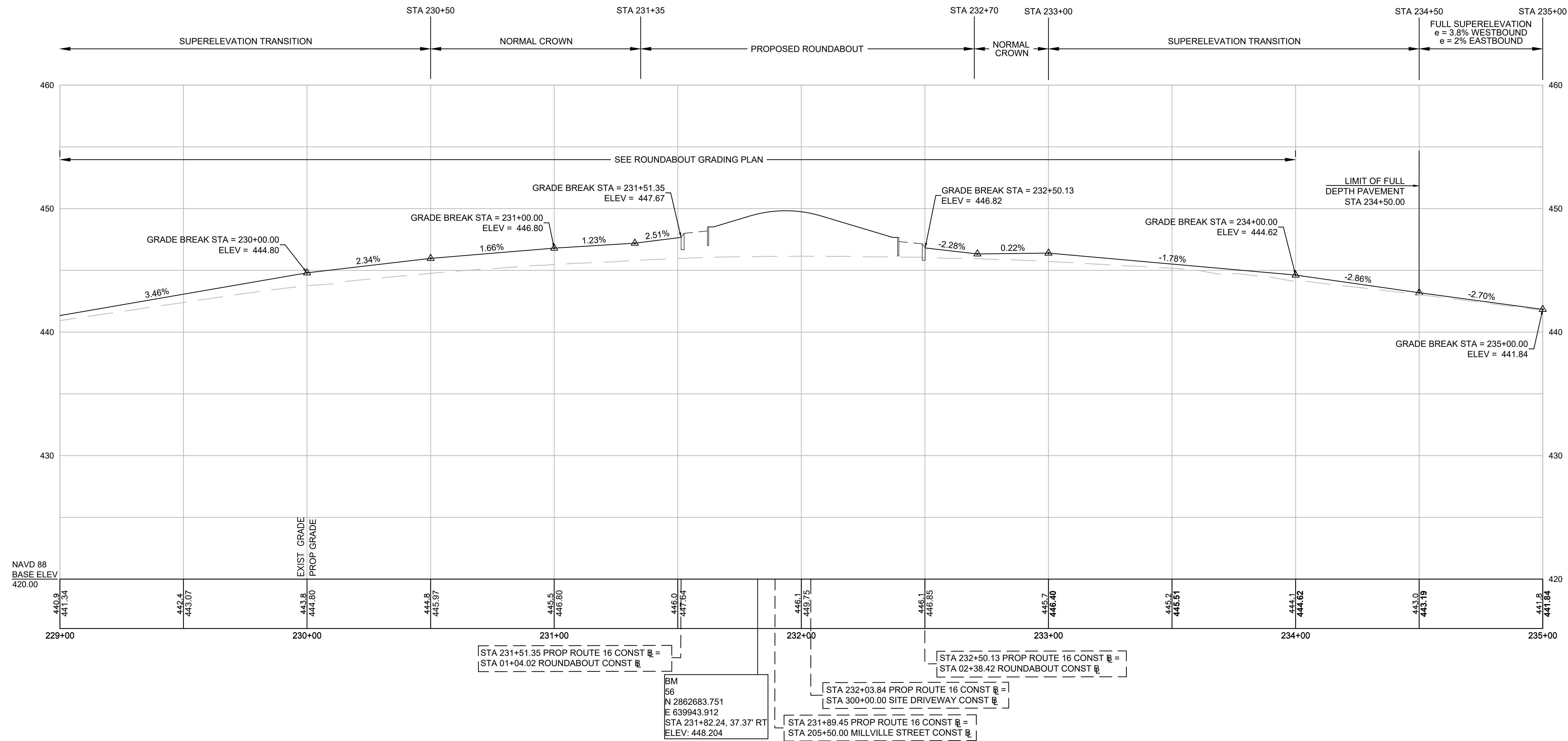
FOR CONSTRUCTION PLAN: SEE SHEET NO. 11

**MENDON
ROUTE 16**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	15	57
PROJECT FILE NO. N/A (ACCESS PERMIT)			

PROFILE - ROUTE 16
STA 229+00 TO STA 235+00

ROUTE 16



BM
56
N 2862683.751
E 639943.912
STA 231+82.24, 37.37' RT
ELEV: 448.204

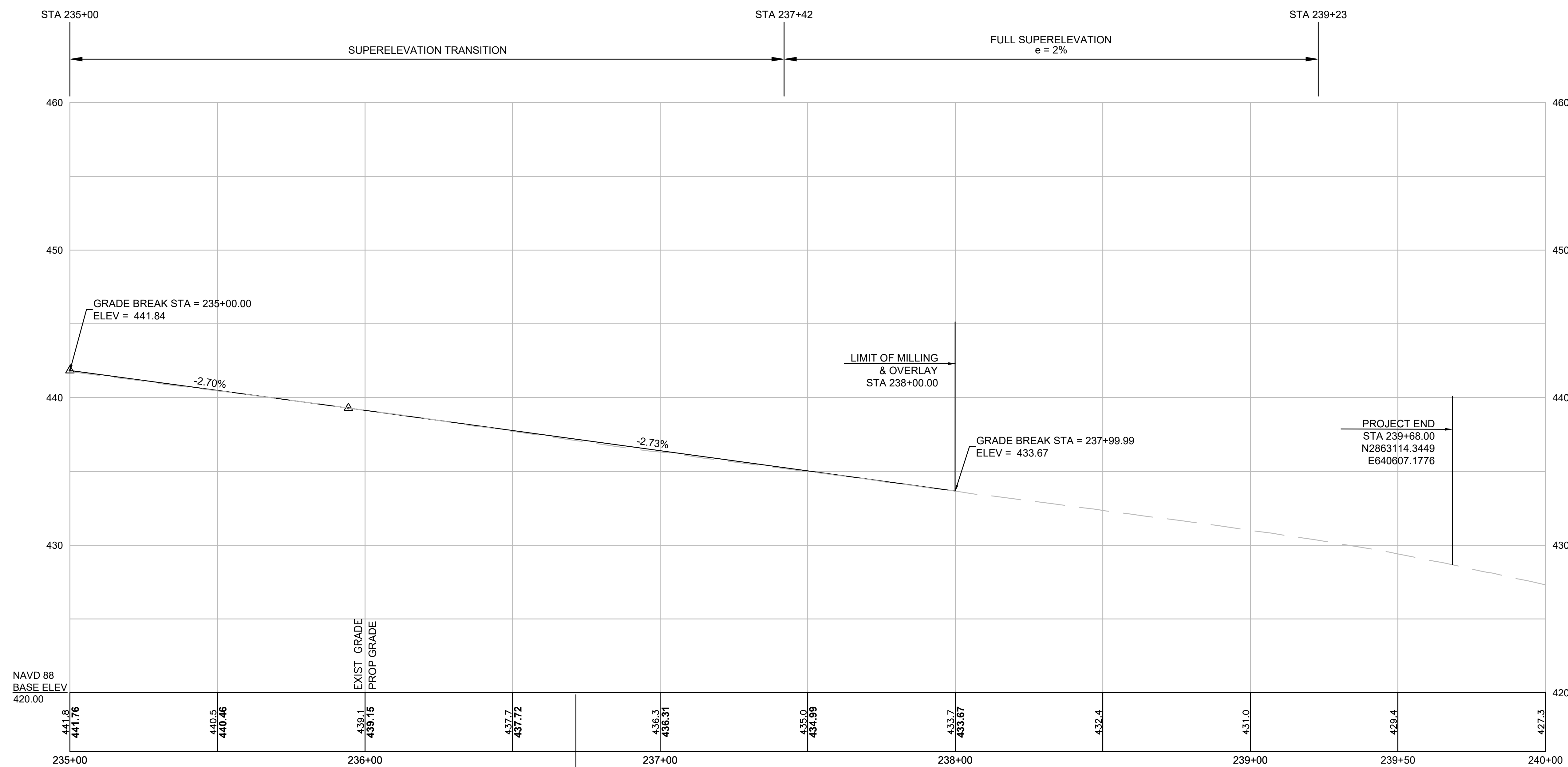
FOR CONSTRUCTION PLAN: SEE SHEET NO. 12

MENDON
ROUTE 16

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	16	57
PROJECT FILE NO. N/A (ACCESS PERMIT)			

PROFILE - ROUTE 16
STA 235+00 TO STA 239+50

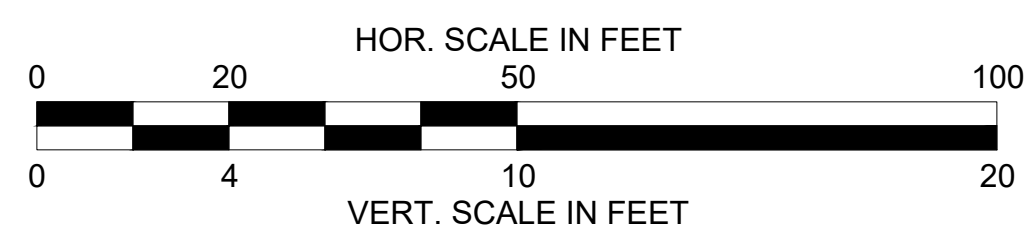
ROUTE 16



NAVD 88
BASE ELEV
420.00

EXIST GRADE
PROP GRADE

BM
MAG 53
N 2862979.9023
E 640337.456
STA 236+68.63, 22.74' LT
ELEV: 437.262



FOR CONSTRUCTION PLAN: SEE SHEET NO. 13

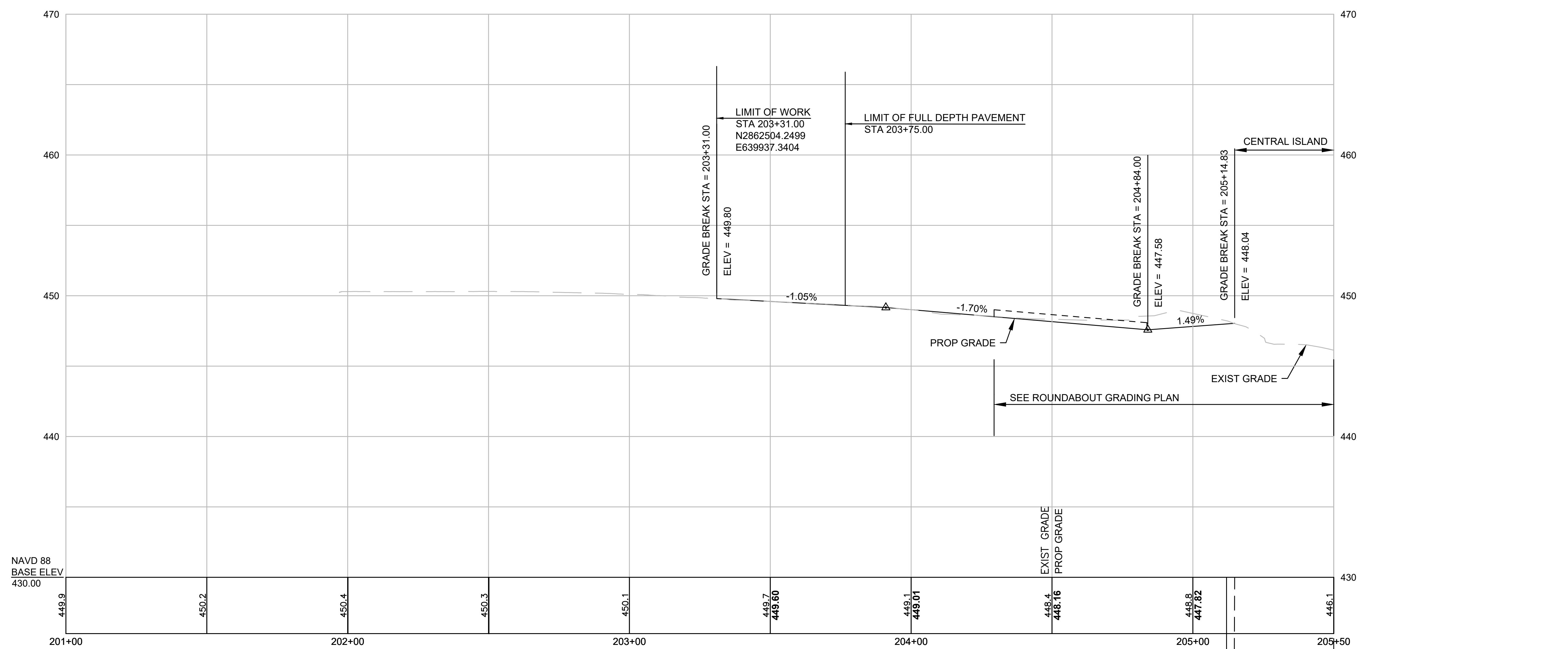
MENDON
ROUTE 16

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	17	57

PROJECT FILE NO. N/A (ACCESS PERMIT)

PROFILE - MILLVILLE STREET

MILLVILLE STREET

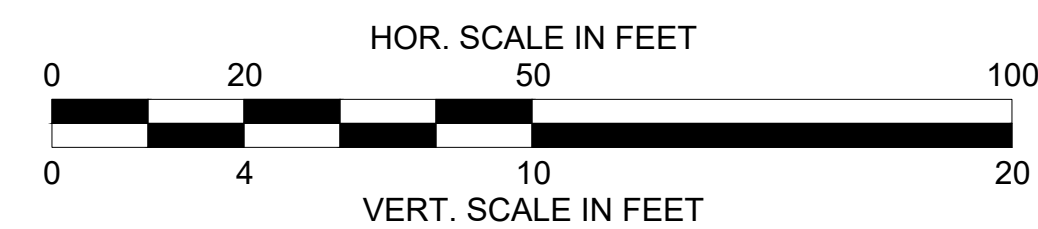


NAVD 88
BASE ELEV
430.00

BM
56
N 2862683.751
E 639943.912
STA 1+52.88, 3.312' RT
ELEV: 448.204

STA 205+50.00 MILLVILLE STREET CONST \square =
STA 231+89.45 PROP ROUTE 16 CONST \square =

STA 205+14.83 MILLVILLE STREET CONST \square =
STA 01+55.62 ROUNDABOUT CONST \square



FOR CONSTRUCTION PLAN: SEE SHEET NO. 12

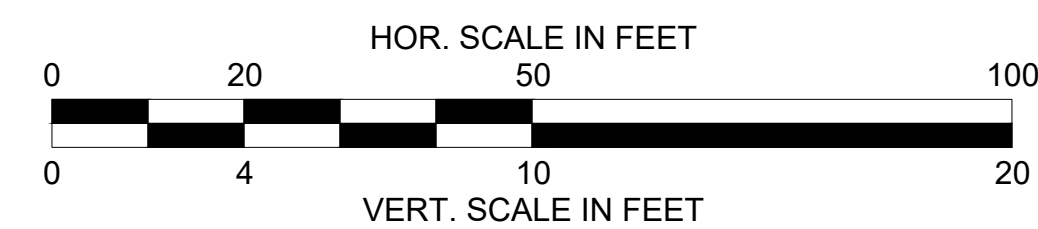
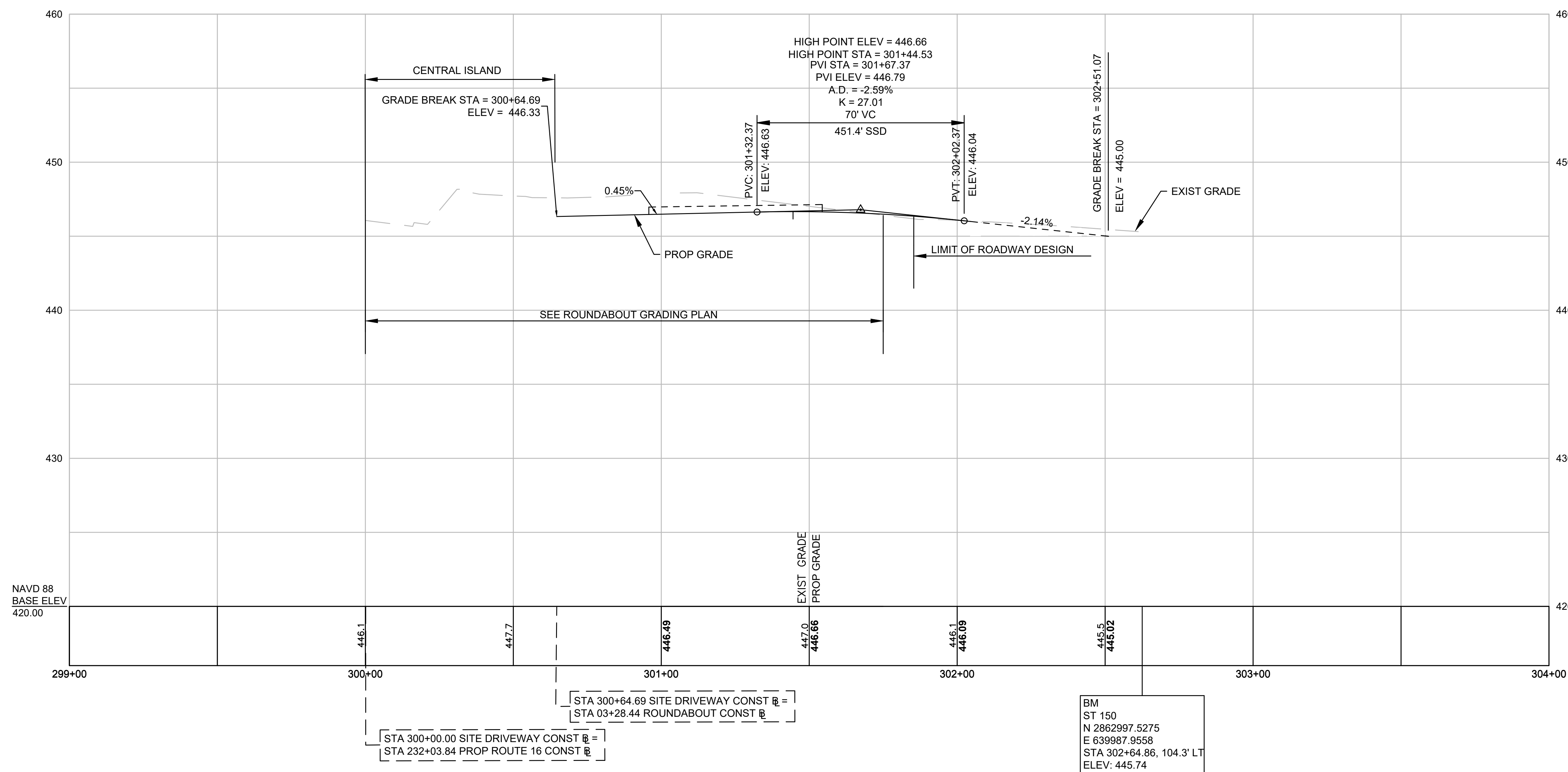
MENDON
ROUTE 16

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	18	57

PROJECT FILE NO. N/A (ACCESS PERMIT)

PROFILE - SITE DRIVEWAY

SITE DRIVEWAY



FOR CONSTRUCTION PLAN: SEE SHEET NO. 12

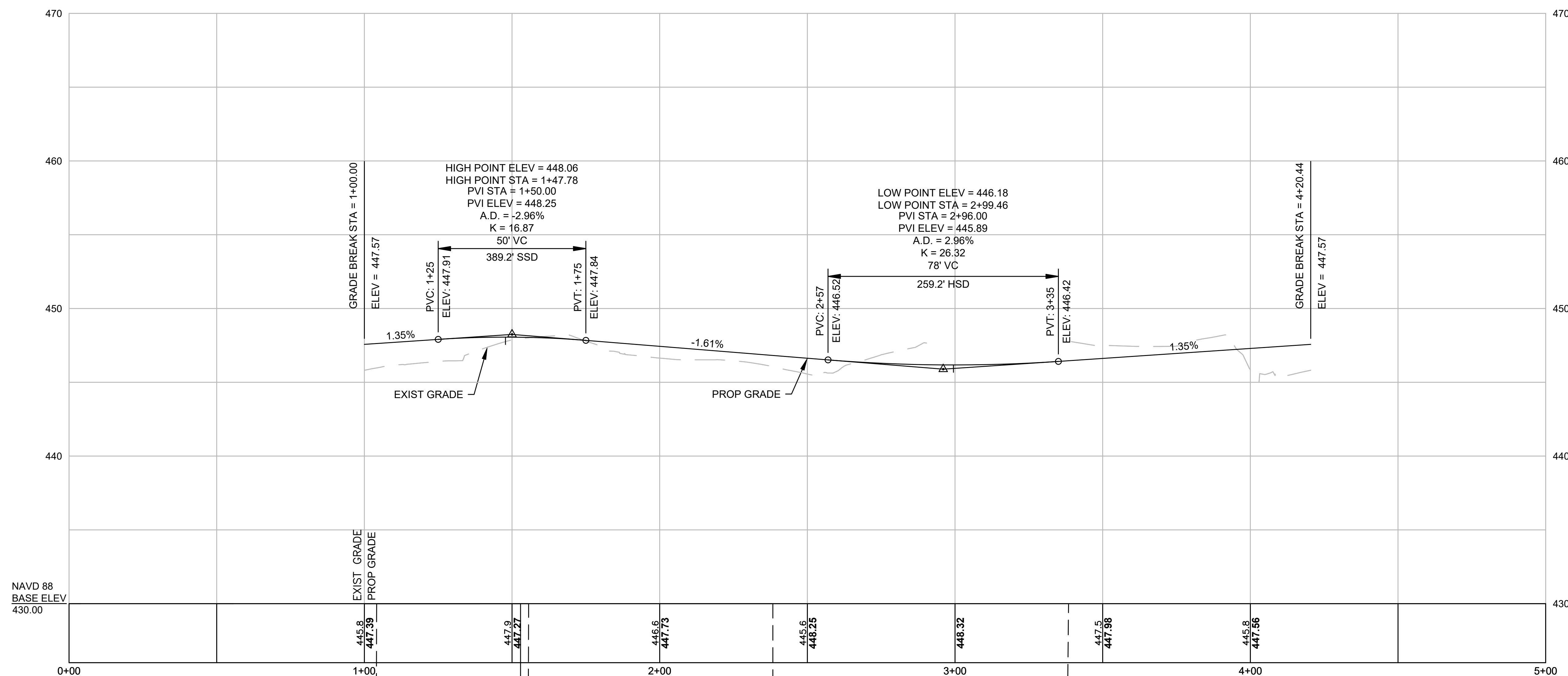
MENDON
ROUTE 16

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	19	57

PROJECT FILE NO. N/A (ACCESS PERMIT)

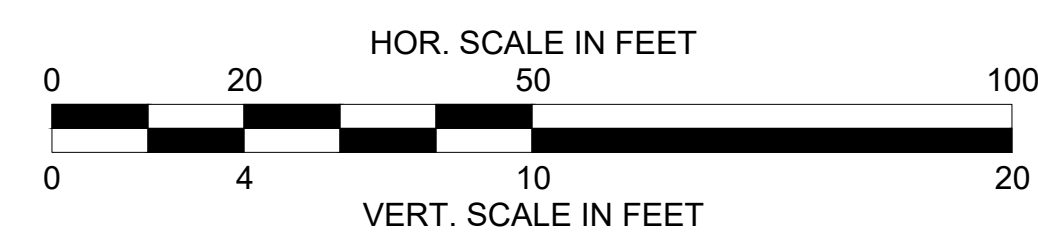
PROFILE - ROUNDABOUT

ROUNDABOUT



- | |
|--------------------------------------------------------------------------|
| STA 01+04.02 ROUNDABOUT CONST @ =
STA 231+51.35 PROP ROUTE 16 CONST @ |
|--------------------------------------------------------------------------|
- | |
|-----------------------------------------------------------------------------|
| STA 01+55.62 ROUNDABOUT CONST @ =
STA 205+14.83 MILLVILLE STREET CONST @ |
|-----------------------------------------------------------------------------|
- | |
|--------------------------------------------------------------------------|
| STA 02+38.42 ROUNDABOUT CONST @ =
STA 232+50.13 PROP ROUTE 16 CONST @ |
|--------------------------------------------------------------------------|
- | |
|--------------------------------------------------------------------------|
| STA 03+28.44 ROUNDABOUT CONST @ =
STA 300+64.69 SITE DRIVEWAY CONST @ |
|--------------------------------------------------------------------------|

BM
56
N 2862683.751
E 639943.912
STA 1+52.88, 3.312' RT
ELEV: 448.204

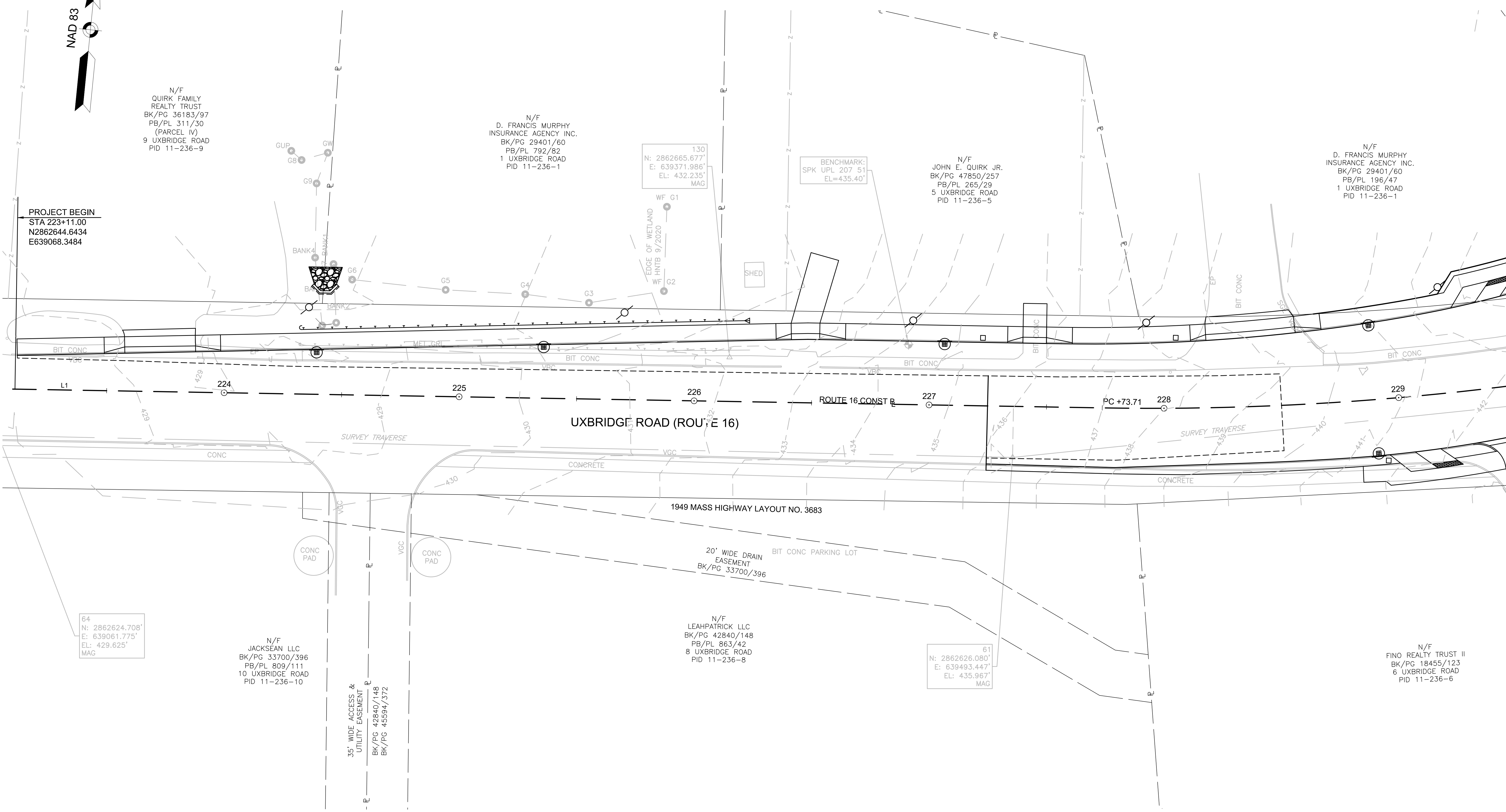
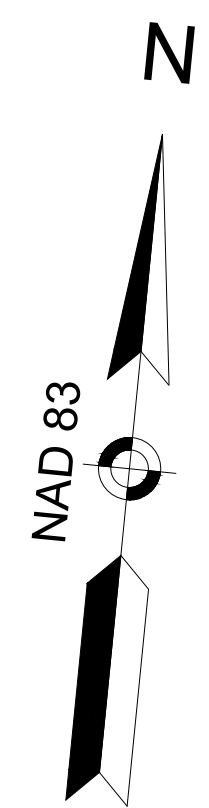


FOR CONSTRUCTION PLAN: SEE SHEET NO. 12

**MENDON
ROUTE 16**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	20	57
PROJECT FILE NO. N/A (ACCESS PERMIT)			

CURB TIE AND GRADING PLANS
SHEET 1 OF 3



N/F
QUIRK FAMILY
REALTY TRUST
BK/PG 36183/97
PB/PL 311/30
(PARCEL IV)
9 UXBRIDGE ROAD
PID 11-236-9

N/F
D. FRANCIS MURPHY
INSURANCE AGENCY INC.
BK/PG 29401/60
PB/PL 792/82
1 UXBRIDGE ROAD
PID 11-236-1

130
N: 2862665.677'
E: 639371.986'
EL: 432.235'
MAG

BENCHMARK:
SPK UPL 207 51
EL=435.40'

N/F
JOHN E. QUIRK JR.
BK/PG 47850/257
PB/PL 265/29
5 UXBRIDGE ROAD
PID 11-236-5

N/F
D. FRANCIS MURPHY
INSURANCE AGENCY INC.
BK/PG 29401/60
PB/PL 196/47
1 UXBRIDGE ROAD
PID 11-236-1

PROJECT BEGIN
STA 223+11.00
N2862644.6434
E639068.3484

64
N: 2862624.708'
E: 639061.775'
EL: 429.625'
MAG

N/F
JACKSEAN LLC
BK/PG 33700/396
PB/PL 809/111
10 UXBRIDGE ROAD
PID 11-236-10

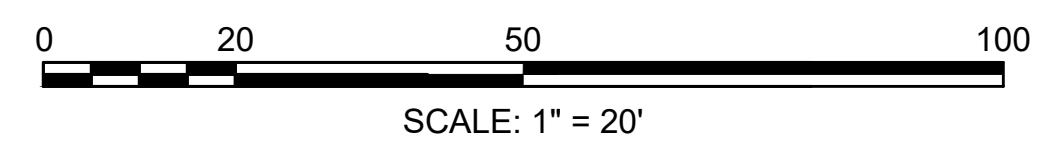
35' WIDE ACCESS &
UTILITY EASEMENT
BK/PG 42840/148
BK/PG 45594/372

N/F
LEAHPATRICK LLC
BK/PG 42840/148
PB/PL 863/42
8 UXBRIDGE ROAD
PID 11-236-8

61
N: 2862626.080'
E: 639493.447'
EL: 435.967'
MAG

N/F
FINO REALTY TRUST II
BK/PG 18455/123
6 UXBRIDGE ROAD
PID 11-236-6

- NOTES:**
- PRELIMINARY CRITICAL GRADING AT ROUNDABOUT SHOWN FOR EARLY REVIEW PURPOSES. PROPOSED GRADING WILL BE FINALIZED FOR NEXT SUBMISSION.
 - CURB TIES WILL BE ADDED FOR NEXT SUBMISSION.



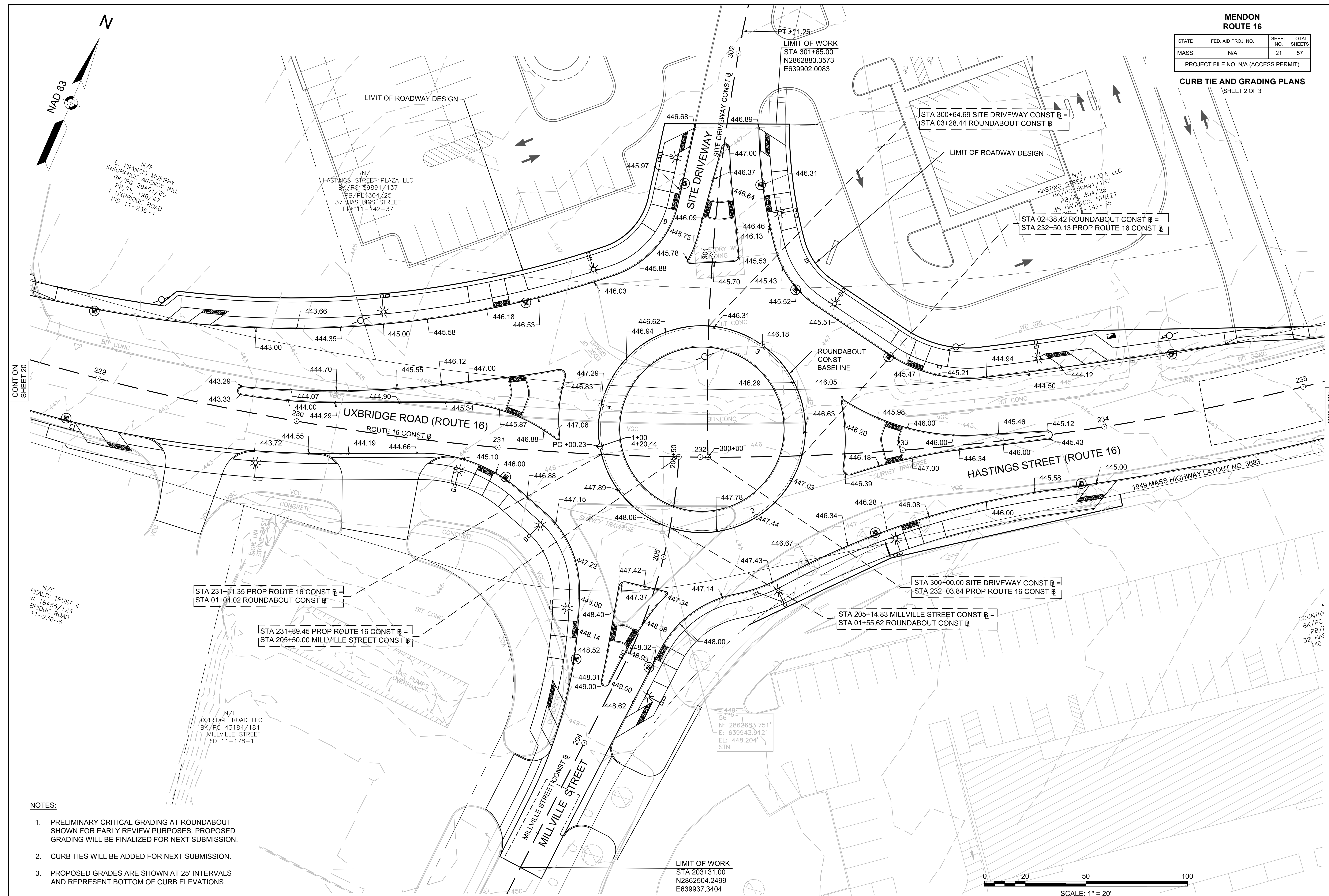
CONT ON
SHEET 21

**MENDON
ROUTE 16**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	21	57

CURB TIE AND GRADING PLANS
SHEET 2 OF 3

PROJECT FILE NO. N/A (ACCESS PERMIT)

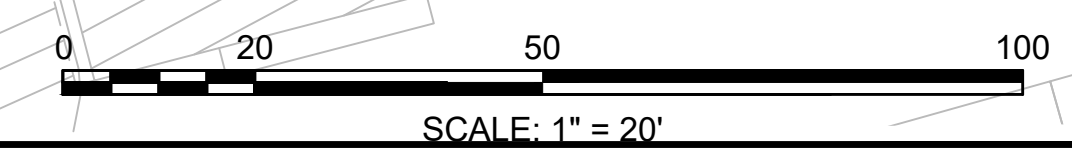


CONT ON SHEET 20

CONT ON SHEET 22

- NOTES:**
1. PRELIMINARY CRITICAL GRADING AT ROUNDABOUT SHOWN FOR EARLY REVIEW PURPOSES. PROPOSED GRADING WILL BE FINALIZED FOR NEXT SUBMISSION.
 2. CURB TIES WILL BE ADDED FOR NEXT SUBMISSION.
 3. PROPOSED GRADES ARE SHOWN AT 25' INTERVALS AND REPRESENT BOTTOM OF CURB ELEVATIONS.

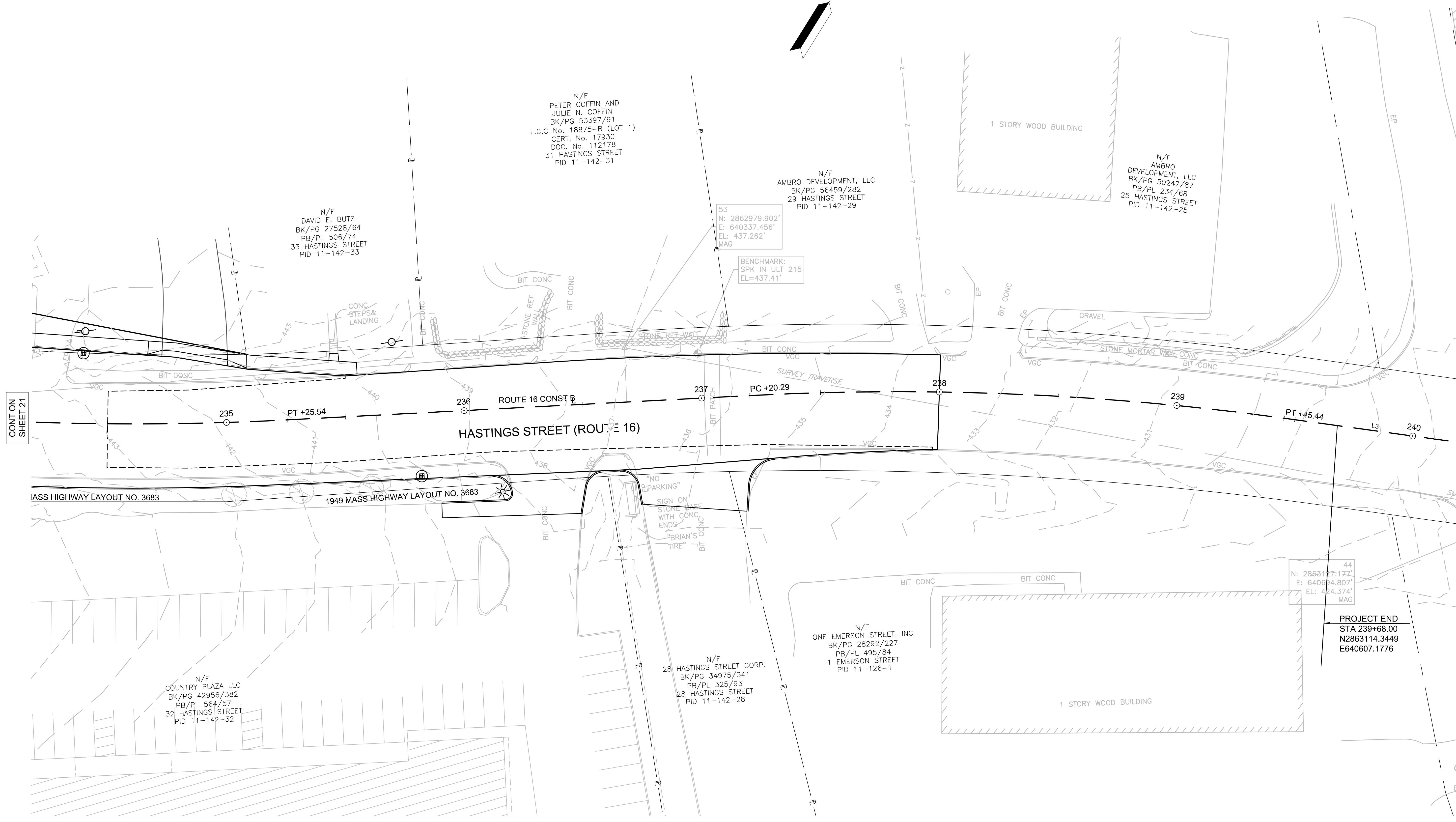
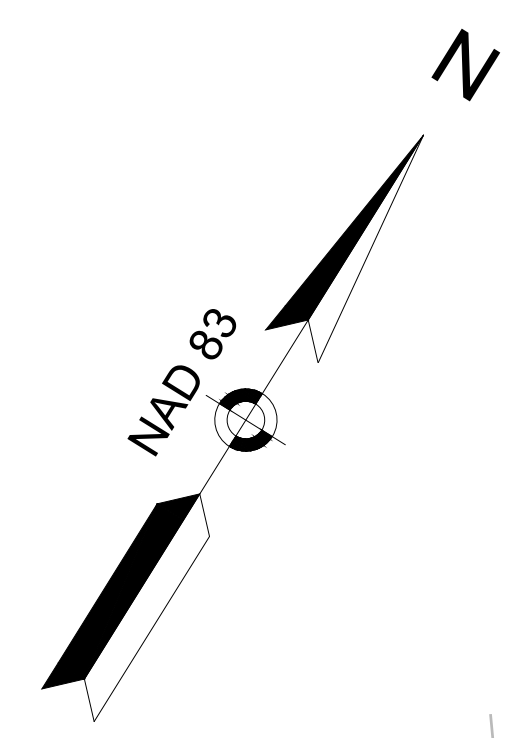
LIMIT OF WORK
STA 203+31.00
N2862504.2499
E639937.3404



**MENDON
ROUTE 16**

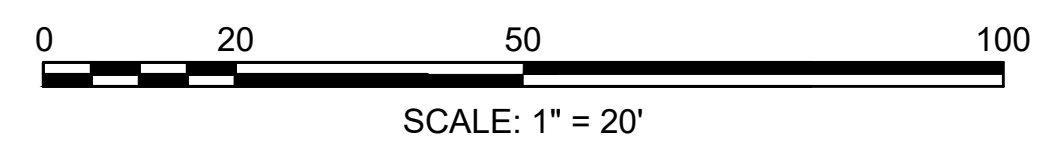
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	22	57

PROJECT FILE NO. N/A (ACCESS PERMIT)
CURB TIE AND GRADING PLANS
SHEET 3 OF 3



CONT ON
SHEET 21

- NOTES:**
- PRELIMINARY CRITICAL GRADING AT ROUNDABOUT SHOWN FOR EARLY REVIEW PURPOSES. PROPOSED GRADING WILL BE FINALIZED FOR NEXT SUBMISSION.
 - CURB TIES WILL BE ADDED FOR NEXT SUBMISSION.



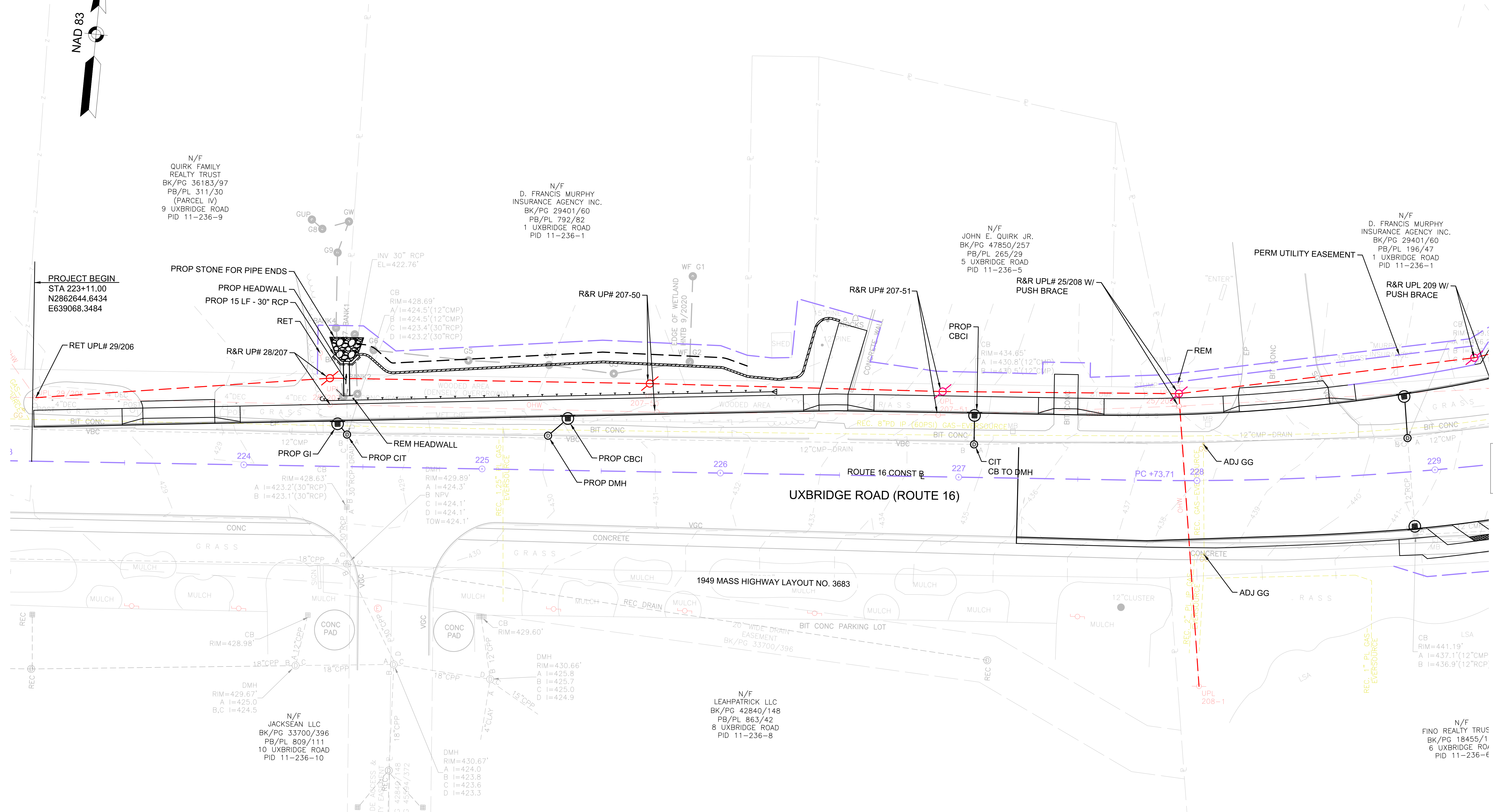
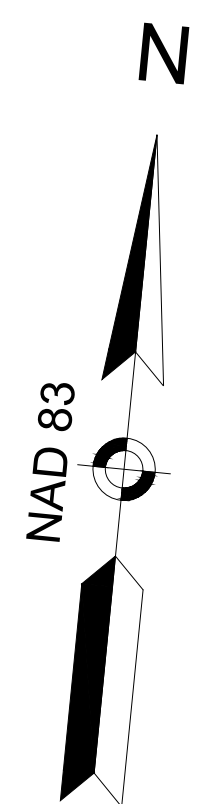
44
N: 2863177.122'
E: 640664.807'
EL: 424.374'
MAG

PROJECT END
STA 239+68.00
N2863114.3449
E640607.1776

**MENDON
ROUTE 16**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	23	57

DRAINAGE & UTILITY PLANS
SHEET 1 OF 3



N/F
QUIRK FAMILY
REALTY TRUST
BK/PG 36183/97
PB/PL 311/30
(PARCEL IV)
9 UXBRIDGE ROAD
PID 11-236-9

N/F
D. FRANCIS MURPHY
INSURANCE AGENCY INC.
BK/PG 29401/60
PB/PL 792/82
1 UXBRIDGE ROAD
PID 11-236-1

N/F
JOHN E. QUIRK JR.
BK/PG 47850/257
PB/PL 265/29
5 UXBRIDGE ROAD
PID 11-236-5

N/F
D. FRANCIS MURPHY
INSURANCE AGENCY INC.
BK/PG 29401/60
PB/PL 196/47
1 UXBRIDGE ROAD
PID 11-236-1

PROJECT BEGIN
STA 223+11.00
N2862644.6434
E639068.3484

PROP STONE FOR PIPE ENDS
PROP HEADWALL
PROP 15 LF - 30" RCP
RET
R&R UP# 28/207

R&R UP# 207-50

R&R UP# 207-51

R&R UPL# 25/208 W/
PUSH BRACE

PERM UTILITY EASEMENT

R&R UPL 209 W/
PUSH BRACE

RET UPL# 29/206

R&R UP# 28/207

R&R UP# 207-50

R&R UP# 207-51

R&R UPL# 25/208 W/
PUSH BRACE

PERM UTILITY EASEMENT

R&R UPL 209 W/
PUSH BRACE

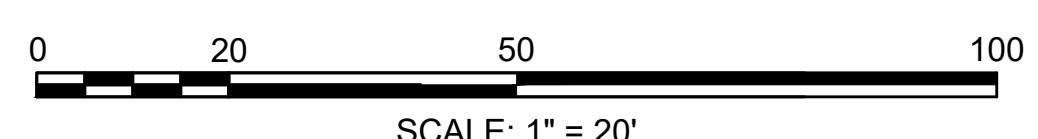
UXBRIDGE ROAD (ROUTE 16)

1949 MASS HIGHWAY LAYOUT NO. 3683

N/F
JACKSEAN LLC
BK/PG 33700/396
PB/PL 809/111
10 UXBRIDGE ROAD
PID 11-236-10

N/F
LEAHPATRICK LLC
BK/PG 42840/148
PB/PL 863/42
8 UXBRIDGE ROAD
PID 11-236-8

N/F
FINO REALTY TRUS
BK/PG 18455/1
6 UXBRIDGE RO
PID 11-236-E



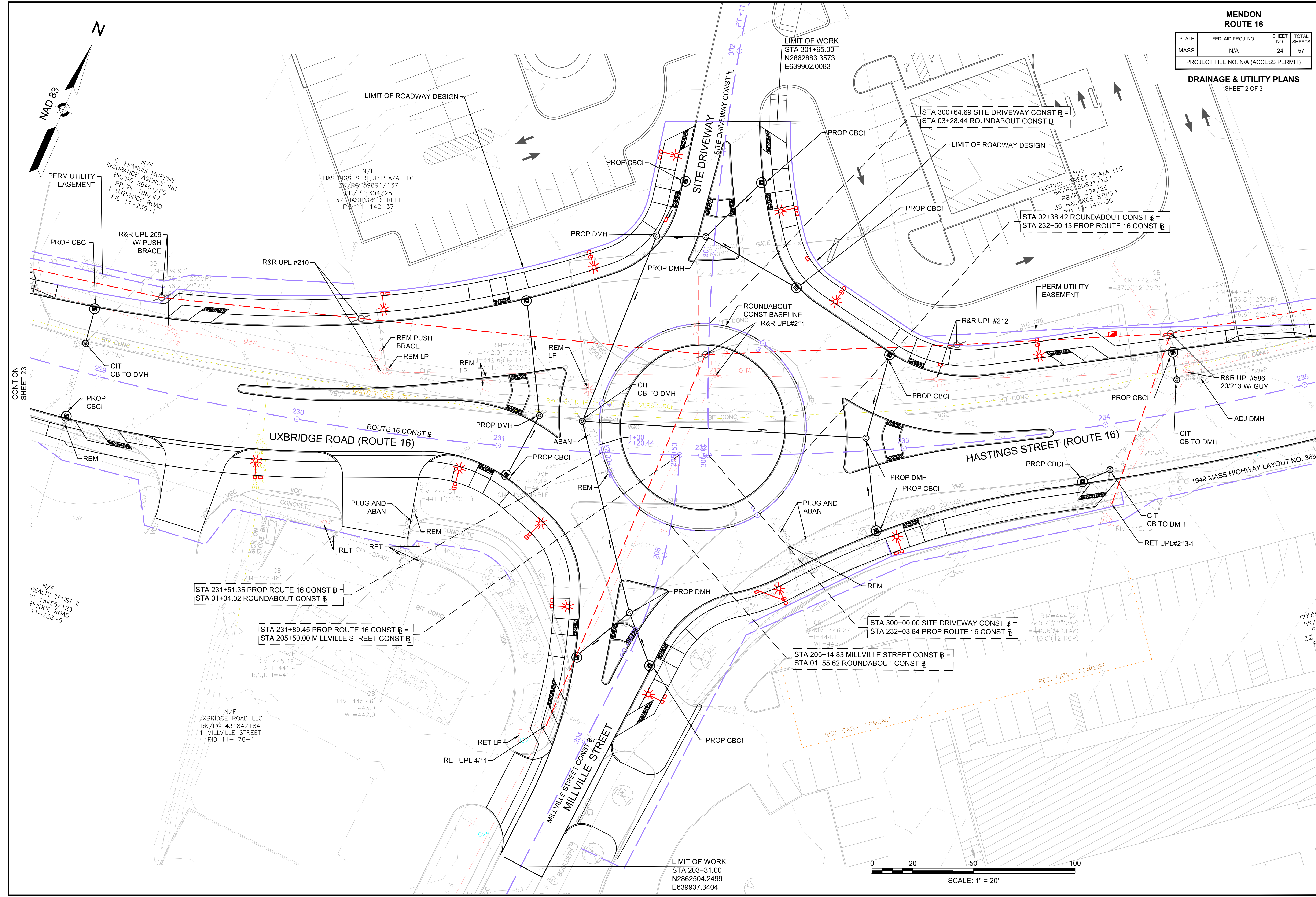
CONT ON
SHEET 24

**MENDON
ROUTE 16**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	24	57

PROJECT FILE NO. N/A (ACCESS PERMIT)

DRAINAGE & UTILITY PLANS
SHEET 2 OF 3



CONT ON SHEET 23

CONT ON SHEET 25

LIMIT OF WORK
STA 203+31.00
N2862504.2499
E639937.3404

0 20 50 100
SCALE: 1" = 20'

**MENDON
ROUTE 16**

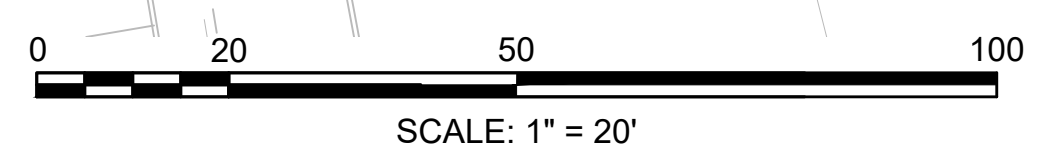
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	25	57

PROJECT FILE NO. N/A (ACCESS PERMIT)

DRAINAGE & UTILITY PLANS
SHEET 3 OF 3



CONT ON
SHEET 24

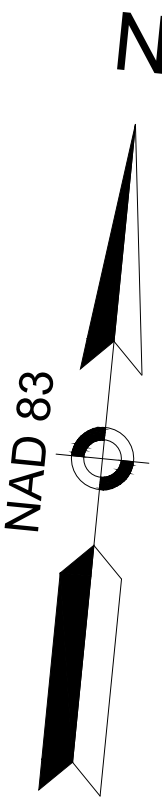


**MENDON
ROUTE 16**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	26	57

PROJECT FILE NO. N/A (ACCESS PERMIT)

TRAFFIC SIGN & PAVEMENT MARKING PLANS
SHEET 1 OF 3



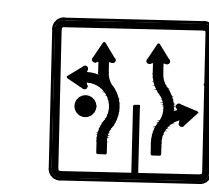
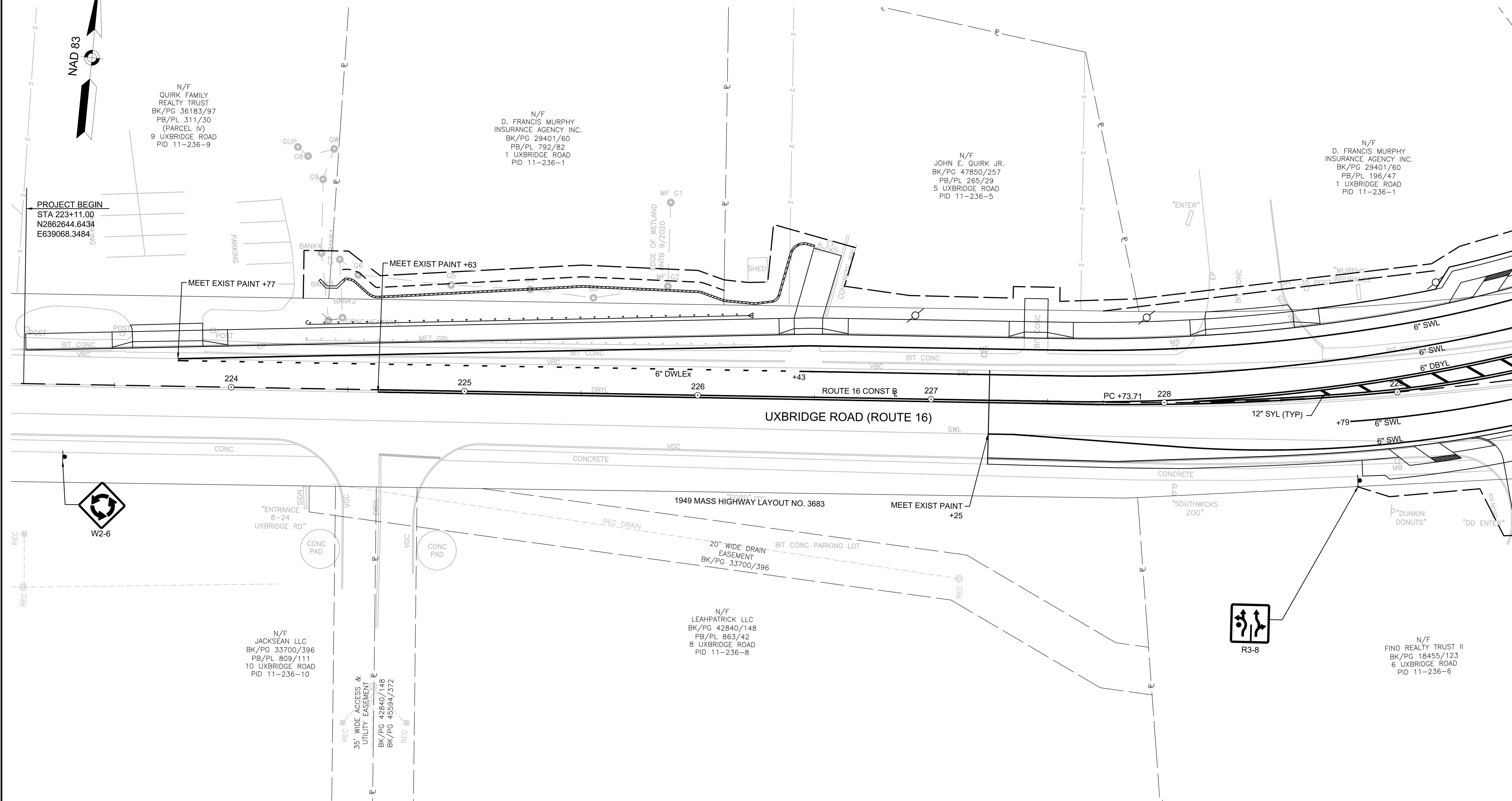
N/F
QUIRK FAMILY
REALTY TRUST
BK/PG 36183/97
PB/PL 311/30
(PARCEL IV)
9 UXBRIDGE ROAD
PID 11-236-9

N/F
D. FRANCIS MURPHY
INSURANCE AGENCY INC.
BK/PG 29401/60
PB/PL 792/82
1 UXBRIDGE ROAD
PID 11-236-1

N/F
JOHN E. QUIRK JR.
BK/PG 47850/257
PB/PL 265/29
5 UXBRIDGE ROAD
PID 11-236-5

N/F
D. FRANCIS MURPHY
INSURANCE AGENCY INC.
BK/PG 29401/60
PB/PL 196/47
1 UXBRIDGE ROAD
PID 11-236-1

PROJECT BEGIN
STA 223+11.00
N2862644.6434
E639068.3484

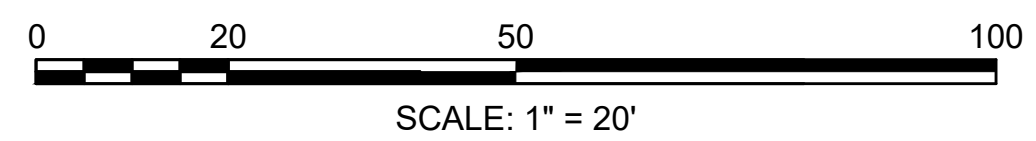


N/F
JACKSEAN LLC
BK/PG 33700/396
PB/PL 809/111
10 UXBRIDGE ROAD
PID 11-236-10

N/F
LEAHPATRICK LLC
BK/PG 42840/148
PB/PL 863/42
8 UXBRIDGE ROAD
PID 11-236-8

N/F
FINO REALTY TRUST II
BK/PG 18455/123
6 UXBRIDGE ROAD
PID 11-236-6

NOTE:
PROPOSED PAVEMENT MARKINGS SHALL BE THERMOPLASTIC.

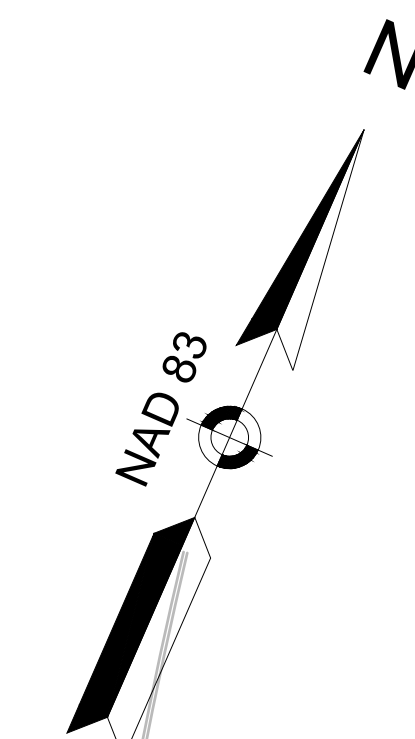
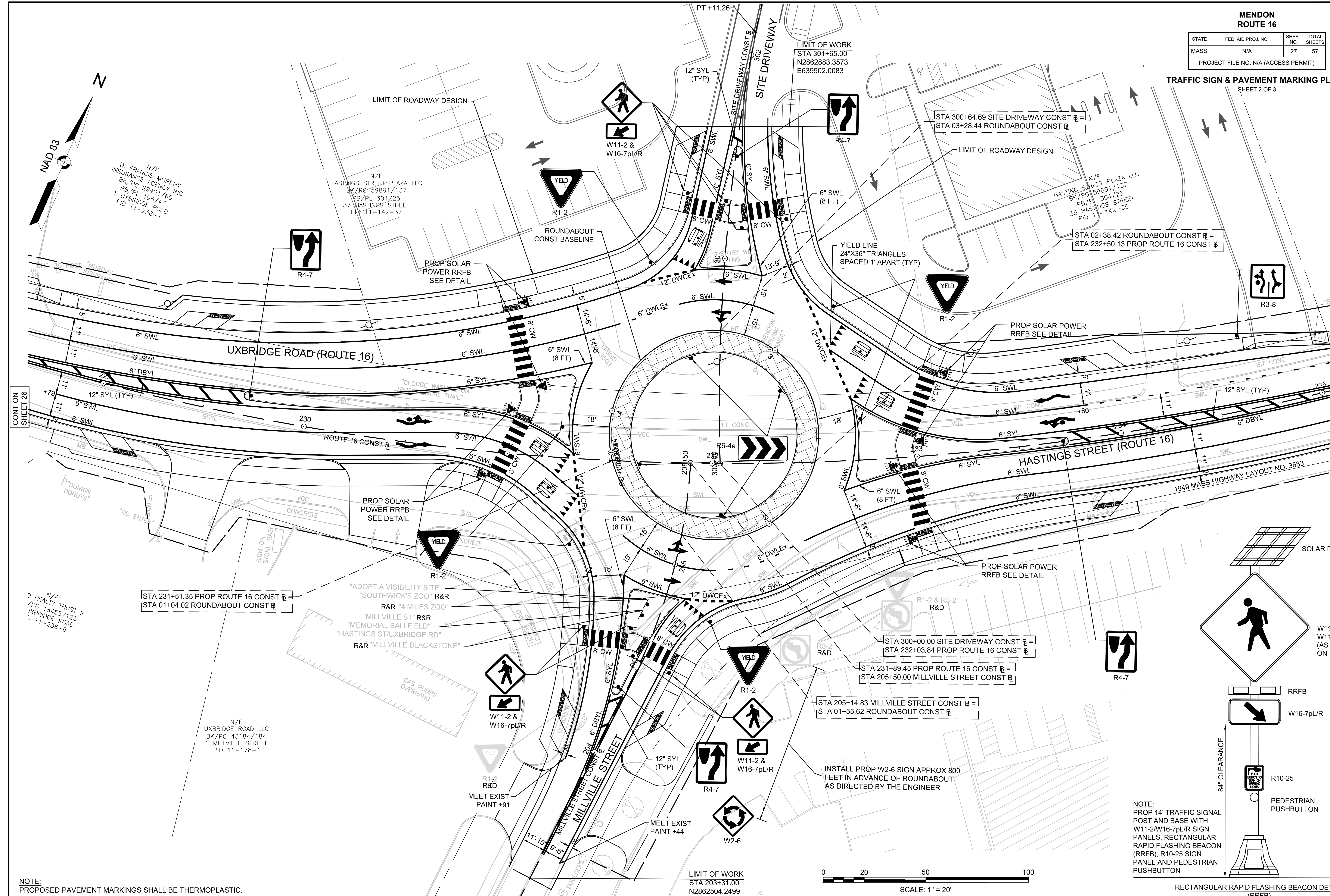


CONT ON
SHEET 27

**MENDON
ROUTE 16**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	27	57
PROJECT FILE NO. N/A (ACCESS PERMIT)			

TRAFFIC SIGN & PAVEMENT MARKING PLANS
SHEET 2 OF 3



N/F
D. FRANCIS MURPHY
INSURANCE AGENCY INC.
BK/PG 29401/60
PB/PL 196/47
1 UXBRIDGE ROAD
PID 11-236-1

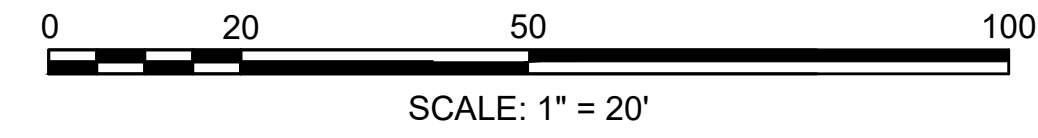
N/F
HASTINGS STREET PLAZA LLC
BK/PG 59891/137
PB/PL 304/25
37 HASTINGS STREET
PID 11-142-37

N/F
HASTINGS STREET PLAZA LLC
BK/PG 59891/137
PB/PL 304/25
35 HASTINGS STREET
PID 11-142-35

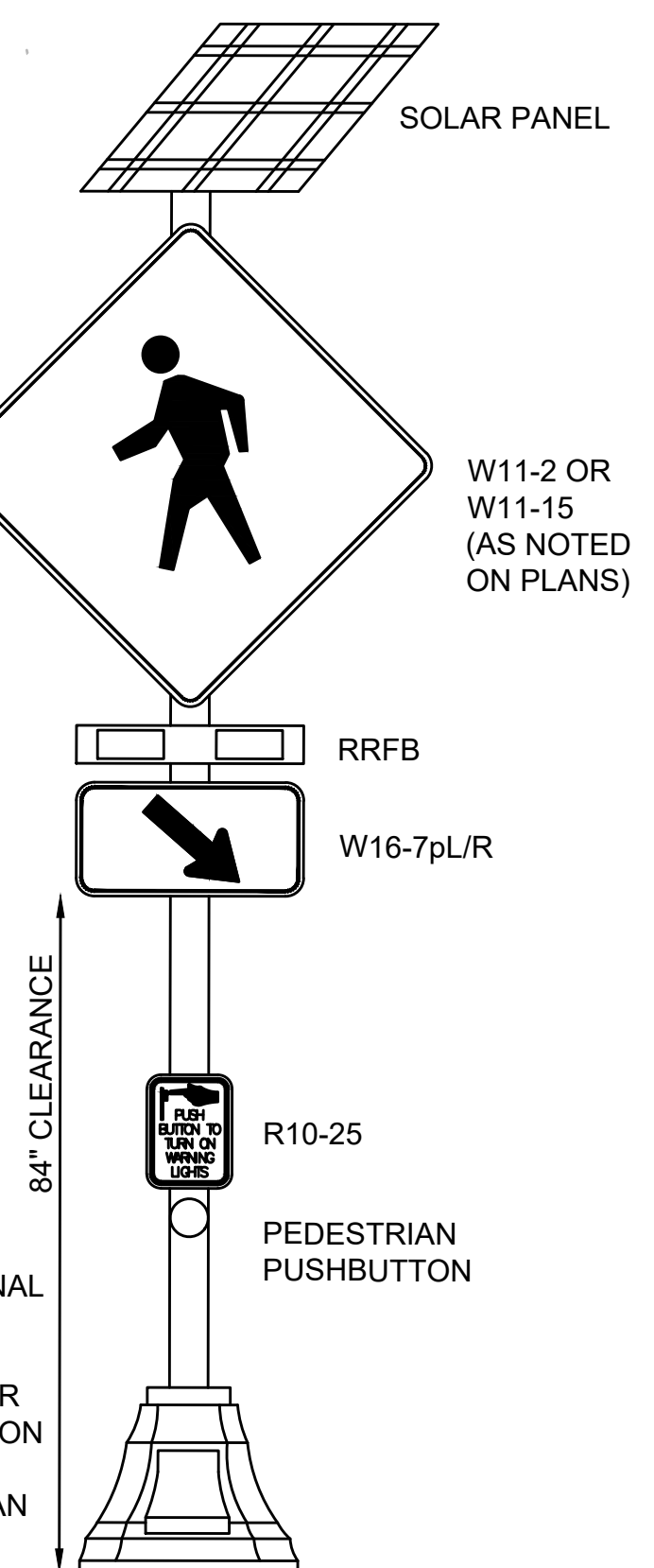
N/F
REALTY TRUST II
/PG 18455/123
UXBRIDGE ROAD
PID 11-236-6

N/F
UXBRIDGE ROAD LLC
BK/PG 43184/184
1 MILLVILLE STREET
PID 11-178-1

LIMIT OF WORK
STA 203+31.00
N2862504.2499
E639937.3404



NOTE:
PROP 14' TRAFFIC SIGNAL
POST AND BASE WITH
W11-2/W16-7pL/R SIGN
PANELS, RECTANGULAR
RAPID FLASHING BEACON
(RRFB), R10-25 SIGN
PANEL AND PEDESTRIAN
PUSHBUTTON



RECTANGULAR RAPID FLASHING BEACON DETAIL (RRFB)

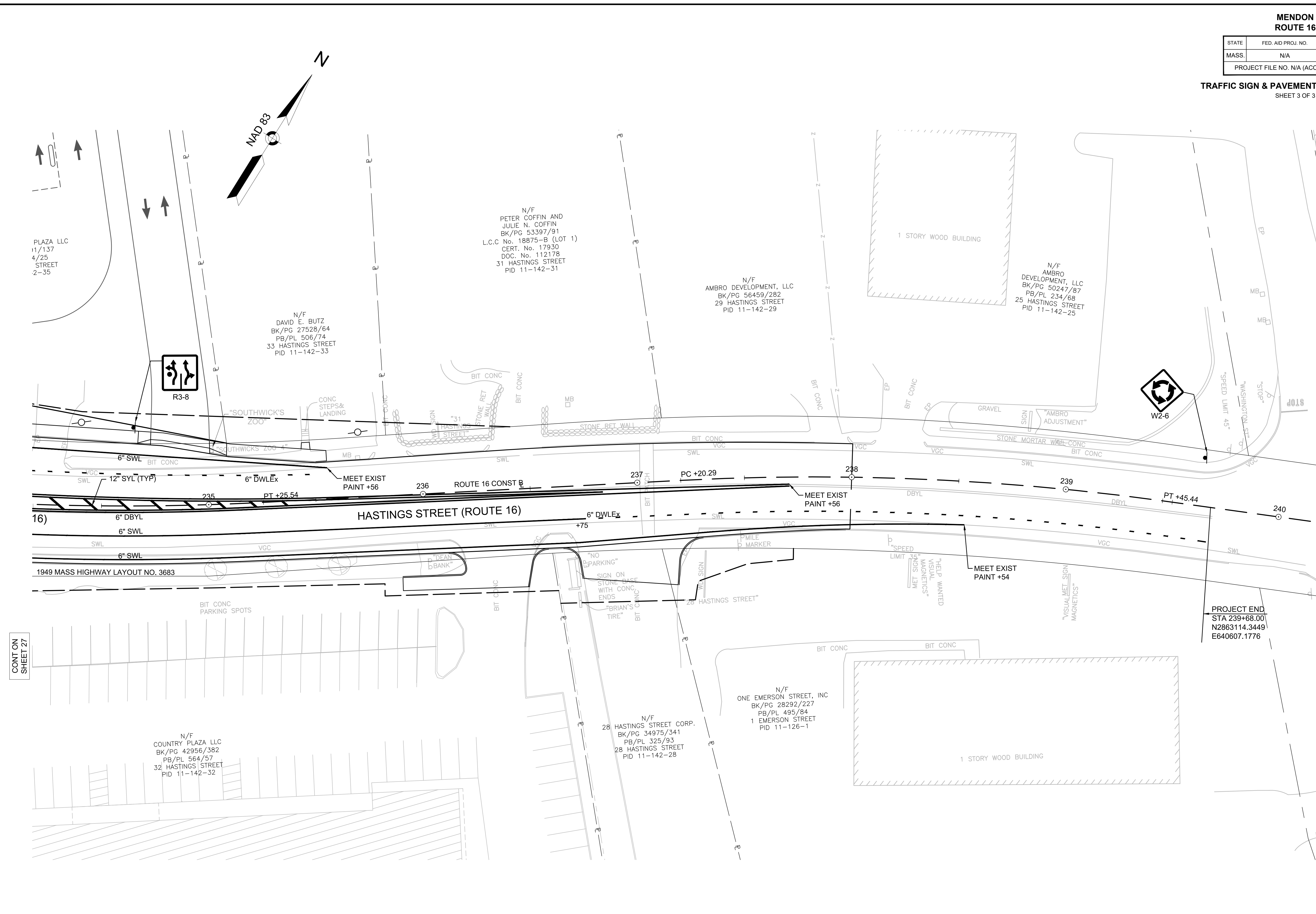
NOTE:
PROPOSED PAVEMENT MARKINGS SHALL BE THERMOPLASTIC.

**MENDON
ROUTE 16**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	28	57

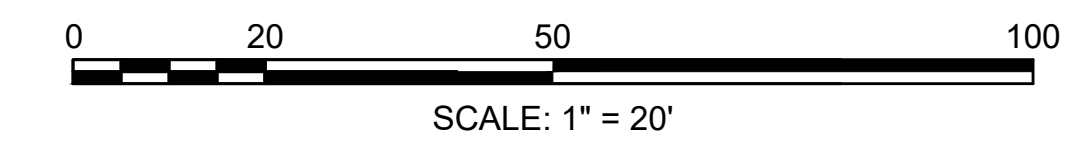
PROJECT FILE NO. N/A (ACCESS PERMIT)

TRAFFIC SIGN & PAVEMENT MARKING PLANS
SHEET 3 OF 3



CONT ON SHEET 27

NOTE:
PROPOSED PAVEMENT MARKINGS SHALL BE THERMOPLASTIC.



TO BE COMPLETED AT NEXT SUBMISSION

TRAFFIC SIGN SUMMARY

**MENDON
ROUTE 16**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	29	57
PROJECT FILE NO. N/A (ACCESS PERMIT)			

TRAFFIC SIGN SUMMARY

IDENTIFI- CATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK- GROUND	LEGEND	BORDER			

IDENTIFI- CATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK- GROUND	LEGEND	BORDER			

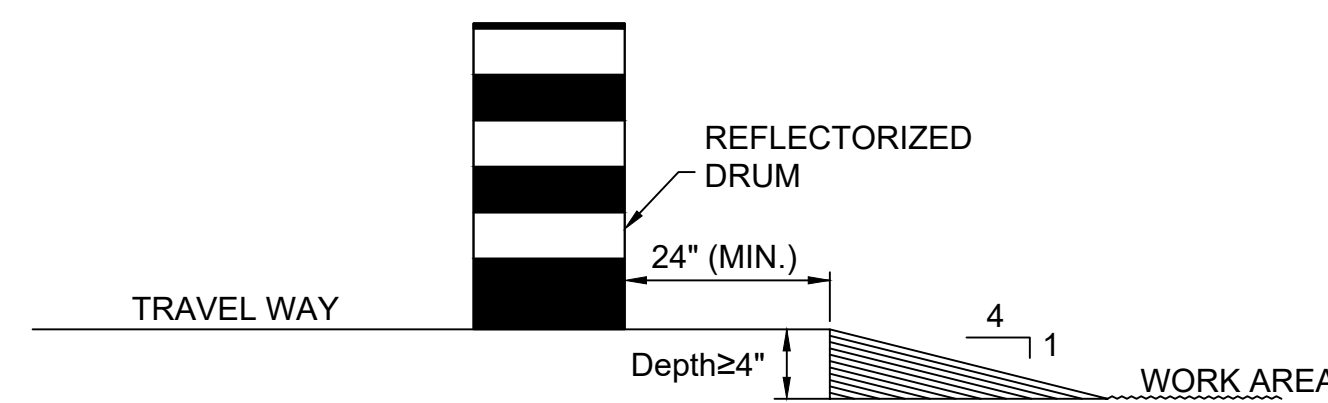
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MASS.	N/A	30	57
PROJECT FILE NO. N/A (ACCESS PERMIT)			

NOTES:

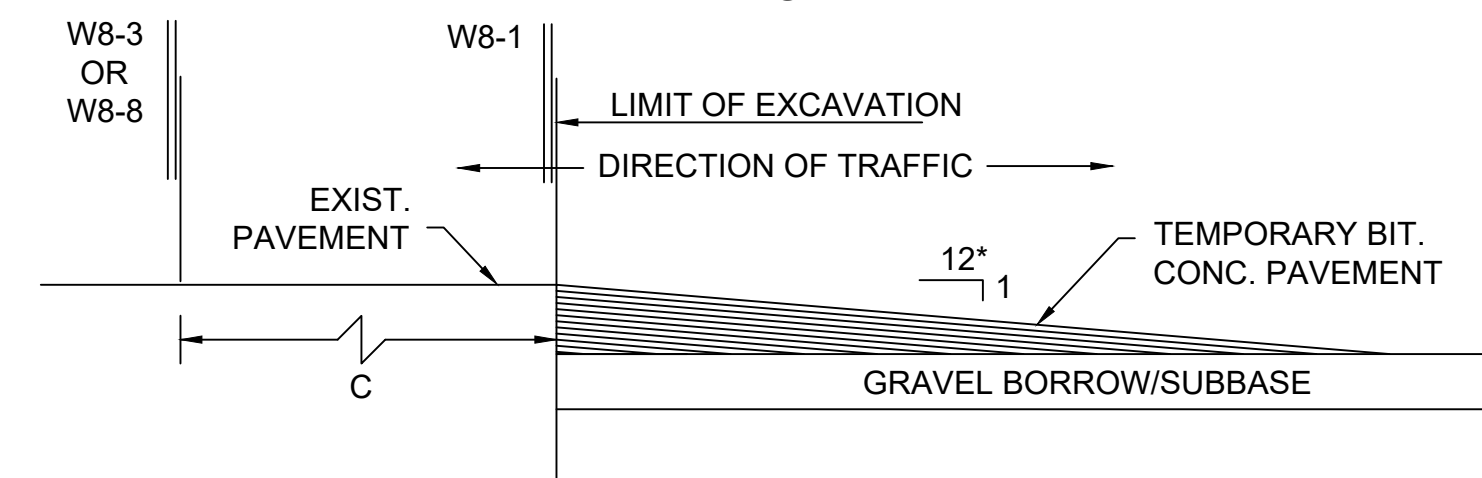
- ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM TO THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS, THE MASSACHUSETTS AMENDMENTS TO THE MUTCD, AND MASSDOT'S TMP MANUAL.
- ALL SIGN LEGENDS, BORDERS AND MOUNTING SHALL BE IN ACCORDANCE WITH THE MUTCD.
- TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF ANY WORK.
- TEMPORARY CONSTRUCTION SIGNING, BARRICADES AND ALL OTHER NECESSARY WORK ZONE TRAFFIC CONTROL DEVICES SHALL BE REMOVED FROM THE HIGHWAY OR COVERED WHEN THEY ARE NOT REQUIRED FOR CONTROL OF TRAFFIC.
- SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELED WAY, CHANNELIZING DEVICES, BARRIERS, AND CRASH ATTENUATORS MUST PASS THE CRITERIA SET FORTH IN NCHRP REPORT 350, "RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES" AND/OR "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH).
- CONTRACTORS SHALL NOTIFY EACH ABUTTER AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OF ACCESS, SUCH AS CONDUIT INSTALLATION, EXISTING PAVEMENT EXCAVATION, TEMPORARY DRIVEWAY PAVEMENT PLACEMENT AND SIMILAR OPERATIONS.
- THE FIRST 10 PLASTIC DRUMS OF A TAPER SHALL BE REFLECTORIZED AND MOUNTED WITH SEQUENTIAL FLASHING LIGHTS.
- THE ADVISORY SPEED LIMIT, IF REQUIRED, SHALL BE DETERMINED BY THE ENGINEER.
- DISTANCES ARE A GUIDE AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
- MAXIMUM SPACING OF TRAFFIC DEVICES IN A TAPER (DRUMS OR CONES) IS EQUAL IN FEET TO THE SPEED LIMIT IN MPH.
- MINIMUM LANE WIDTH IS TO BE 14 FEET UNLESS OTHERWISE SHOWN. MINIMUM LANE WIDTH TO BE MEASURED FROM THE EDGE OF DRUMS OR MEDIAN BARRIER. 14 FEET IS PROVIDED TO ALLOW CYCLISTS TO SHARE THE LANE AS NO SEPARATE BICYCLE FACILITIES ARE PROVIDED.
- ALL SIGNS SHALL BE MOUNTED ON THEIR OWN STANDARD SIGN SUPPORTS.
- CHANNELIZATION WILL BE ACCOMPLISHED THROUGH THE USE OF REFLECTORIZED PLASTIC DRUMS.
- AT THE END OF EACH CONSTRUCTION DAY, THE CONTRACTOR SHALL ENSURE THAT NECESSARY TRAFFIC CONTROL DEVICES ARE EFFECTIVELY PLACED TO PROVIDE SAFE PASSAGE OF VEHICLES AND PEDESTRIANS BETWEEN THE ZONES AND THE ADJOINING ROADWAYS. THE CONTRACTOR SHALL ENSURE THAT SAFE ACCESS/EGRESS OF SIDE STREETS AND ALL DRIVEWAY ENTRANCES AND EXITS ABUTTING THAT WORK ZONE ARE MAINTAINED DURING NIGHT TIME AND ON WEEKENDS.
- THE ADVANCED CONSTRUCTION SIGNING PLAN SHALL REMAIN IN PLACE THROUGHOUT THE DURATION OF THE PROJECT.
- TEMPORARY PAINTED PAVEMENT MARKINGS (6") SHALL BE APPLIED BETWEEN PAVING COURSES OR AS NEEDED. CONFLICTING LINES SHALL BE REMOVED BY AN APPROVED METHOD.
- ALL TEMPORARY PEDESTRIAN ACCESS ROUTES SHALL BE IN CONFORMANCE WITH THE MASSDOT STANDARD DETAILS AND DRAWINGS FOR THE DEVELOPMENT OF TEMPORARY TRAFFIC CONTROL PLANS.
- CONES SHALL BE A MINIMUM OF 36".
- PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE PLACED AT LOCATIONS SHOWN FOR 7 DAYS PRIOR TO CONSTRUCTION.

LEGEND:

- REFLECTORIZED PLASTIC DRUM OR 36" CONE
- ▨ WORK ZONE
- 🚚 WORK VEHICLE
- P/F POLICE/FLAGGER DETAIL
- ➔ DIRECTION OF TRAFFIC
- 🚛 TRUCK MOUNTED ATTENUATOR
- ▩ TYPE III BARRICADE
- 🚦 IMPACT ATTENUATOR
- ➡ TRAFFIC OR PEDESTRIAN SIGNAL
- 📄 CHANGEABLE MESSAGE SIGN
- ▬ MEDIAN BARRIER
- SIGN
- ➡ ARROW BOARD
- 🚧 MEDIAN BARRIER WITH WARNING LIGHTS



LATERAL DROP-OFF DETAIL
NTS



LONGITUDINAL DROP-OFF DETAIL
NTS

* - INCREASE SLOPE RATIO FOR HIGHER SPEEDS

SUGGESTED WORK ZONE WARNING SIGN SPACING

ROAD TYPE	DISTANCE BETWEEN SIGNS **		
	A	B	C
LOCAL OR LOW VOLUME ROADWAYS*	350	350	350
MOST OTHER ROADWAYS*	500	500	500
FREEWAYS AND EXPRESSWAYS*	1,000	1,500	2,640

* ROAD TYPE TO BE DETERMINED BY MASSDOT OFFICE OF TRANSPORTATION PLANNING.

** DISTANCES ARE SHOWN IN FEET. THE COLUMN HEADINGS A, B, AND C ARE THE DIMENSIONS SHOWN IN THE DETAIL/ TYPICAL SETUP FIGURES. THE A DIMENSION IS THE DISTANCE FROM THE TRANSITION OR POINT OF RESTRICTION TO THE FIRST SIGN. THE B DIMENSION IS THE DISTANCE BETWEEN THE FIRST AND SECOND SIGNS. THE C DIMENSION IS THE DISTANCE BETWEEN THE SECOND AND THIRD SIGNS. (THE "THIRD" SIGN IS THE FIRST ONE TYPICALLY ENCOUNTERED BY A DRIVER APPROACHING A TEMPORARY TRAFFIC CONTROL (TTC) ZONE.)

THE "THIRD" SIGN ABOVE IS TYPICALLY REFERRED TO AS AN "ADVANCE WARNING" SIGN ON THE TTCP SETUPS. THESE ADVANCE WARNING SIGNS ARE LOCATED PRIOR TO THE PROJECT LIMITS ON ALL APPROACHES (I.E. THE W20-1 SERIES (ROAD WORK XX FT) SIGNS), AND USUALLY REMAIN FOR THE DURATION OF THE PROJECT. ADDITIONAL SIGNS (I.E. "RIGHT LANE CLOSED 1 MILE" AND "LEFT LANE CLOSED 1 MILE") HAVE BEEN SHOWN IN SOME FIGURES AS EXAMPLES OF REINFORCEMENT SIGN PLACEMENT BUT ARE USED IN RARE OCCASIONS.

THE FIRST AND SECOND WARNING SIGNS ABOVE ARE REFERRED TO AS THE OPERATIONAL (DAY-TO-DAY) WORK ZONE SIGNS AND MAY BE MOVED DEPENDING ON WHERE THE SPECIFIC ROADWAY WORK FOR THAT DAY IS LOCATED.

MA-R2-10a SIGNS SHALL BE PLACED BETWEEN THE SECOND AND THIRD SIGNS AS DESCRIBED ABOVE.

MA- R2-10a, MA-R2-10e, AND W20-1 SERIES SIGNS ARE TO BE INCLUDED ON ALL DETAILS/TYPICAL SETUPS.

MA- R2-10e SHALL BE LOCATED 100'-500' BEYOND ENDING TAPER.

Based on: Table 6C-1 MUTCD LATEST EDITION

TAPER LENGTH CRITERIA FOR TEMPORARY TRAFFIC CONTROL ZONES

TYPE OF TAPER	TAPER LENGTH (L)*
MERGING TAPER	AT LEAST L
SHIFTING TAPER	AT LEAST 0.5L
SHOULDER TAPER	AT LEAST 0.33L
ONE-LANE, TWO-WAY TRAFFIC TAPER	50 FT MIN. 100 FT MAX.
DOWNSTREAM TAPER	50 FT MIN. 100 FT MAX. PER LANE

Source: Table 6C-3 MUTCD LATEST EDITION

FORMULAS FOR DETERMINING TAPER LENGTHS

SPEED LIMIT (S)	TAPER LENGTH (L) FEET
40 MPH OR LESS	$L = \frac{WS^2}{60}$
45 MPH OR MORE	$L = WS$

WHERE: L = TAPER LENGTH IN FEET

W = WIDTH OF OFFSET IN FEET

S = POSTED SPEED LIMIT, OR OFF-PEAK 85TH-PERCENTILE SPEED PRIOR TO WORK STARTING, OR THE ANTICIPATED OPERATING SPEED IN MPH

Source: Table 6C-4 MUTCD LATEST EDITION

CONVENTIONAL ROADWAY- A STREET OR HIGHWAY OTHER THAN A LOW-VOLUME ROAD, EXPRESSWAY, OR FREEWAY.

EXPRESSWAY- A DIVIDED HIGHWAY WITH PARTIAL CONTROL OF ACCESS.

FREEWAY- A DIVIDED HIGHWAY WITH FULL CONTROL OF ACCESS.

LOW-VOLUME ROAD- A FACILITY LYING OUTSIDE OF BUILT-UP AREAS OF CITIES, TOWNS, AND COMMUNITIES, AND IT SHALL HAVE A TRAFFIC VOLUME OF LESS THAN 400 AADT. IT SHALL NOT BE A FREEWAY, EXPRESSWAY, INTERCHANGE RAMP, FREEWAY SERVICE ROAD OR A ROAD ON A DESIGNATED STATE HIGHWAY SYSTEM.

Source: MUTCD LATEST EDITION

STOPPING SIGHT DISTANCE AS A FUNCTION OF SPEED

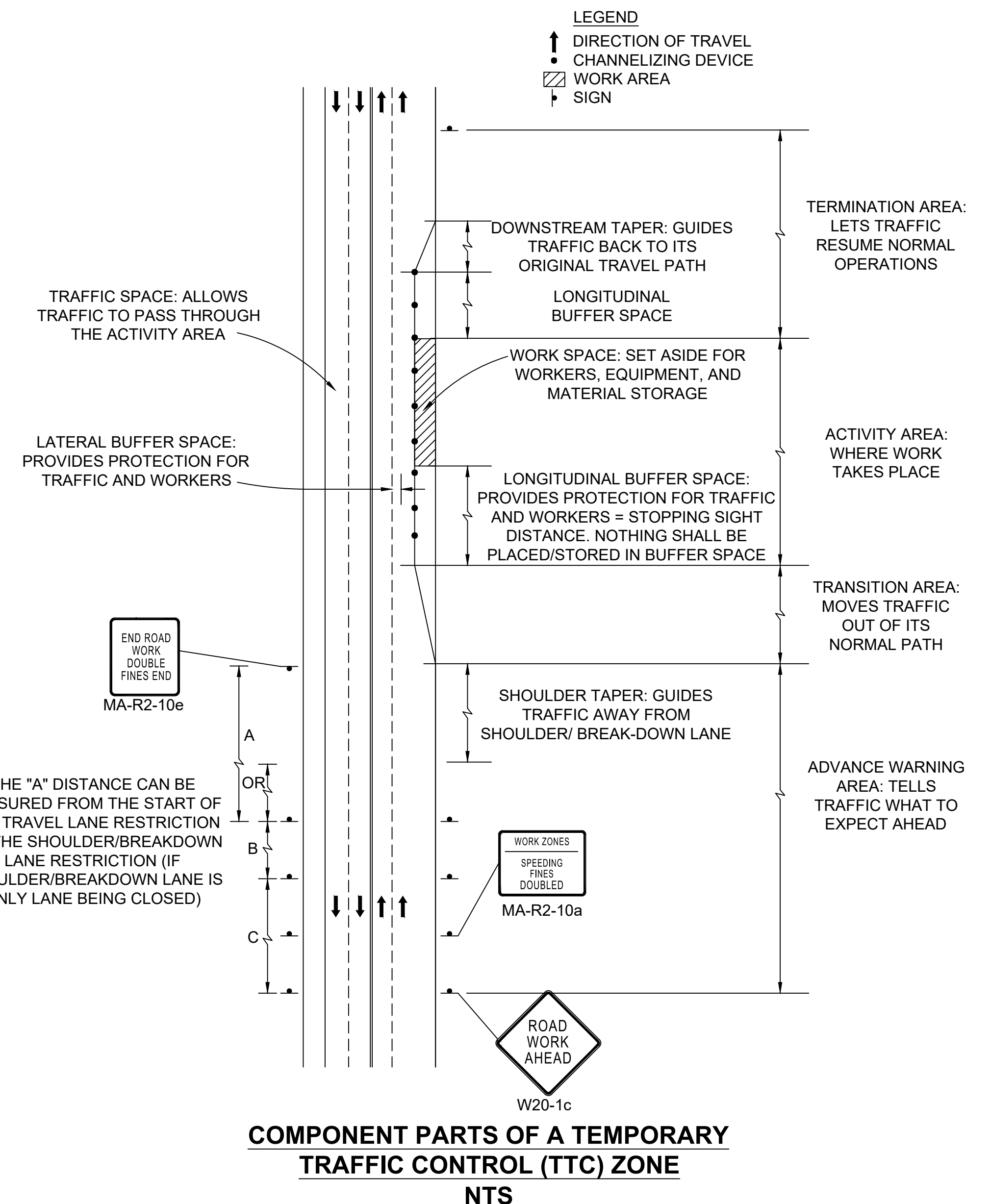
SPEED* (mph)	DISTANCE (ft)
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645
70	730
75	820

*POSTED SPEED, OFF-PEAK 85TH-PERCENTILE SPEED PRIOR TO WORK STARTING, OR THE ANTICIPATED OPERATING SPEED

THESE VALUES MAY BE USED TO DETERMINE THE LENGTH OF LONGITUDINAL BUFFER SPACES.

THE DISTANCES IN THE ABOVE CHART REPRESENT THE MINIMAL VALUES FOR BUFFER SPACING.

Source: Table 6C-2 MUTCD LATEST EDITION

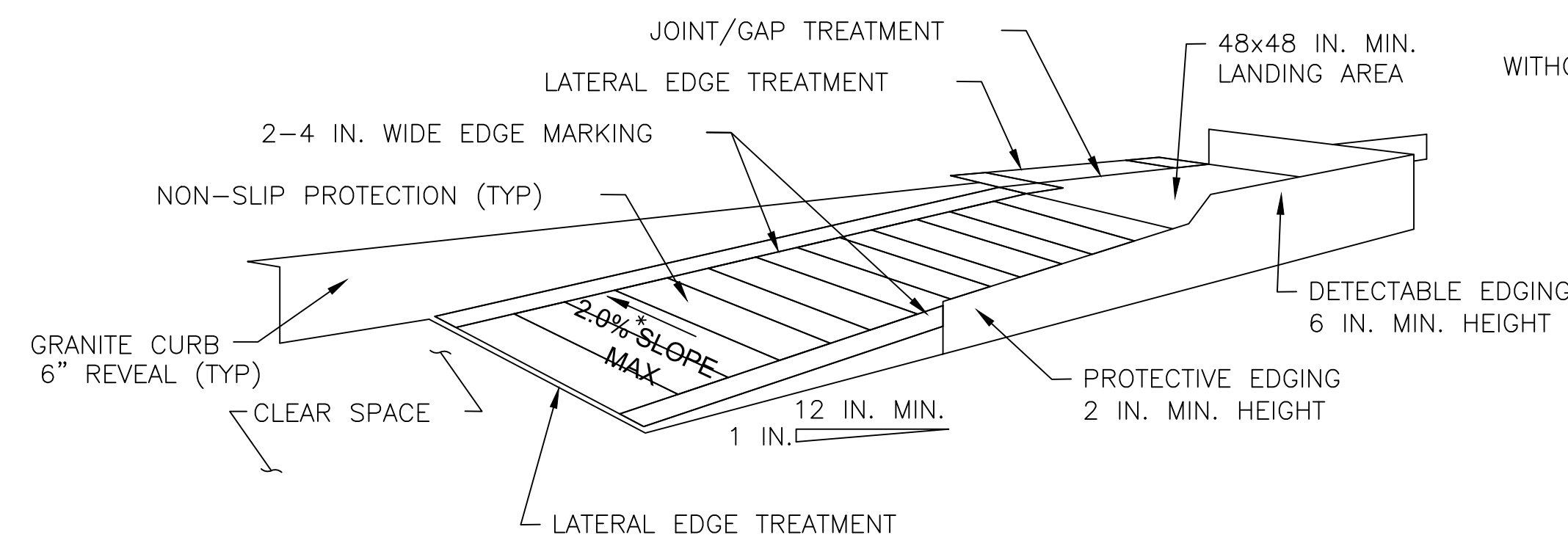


COMPONENT PARTS OF A TEMPORARY TRAFFIC CONTROL (TTC) ZONE
NTS

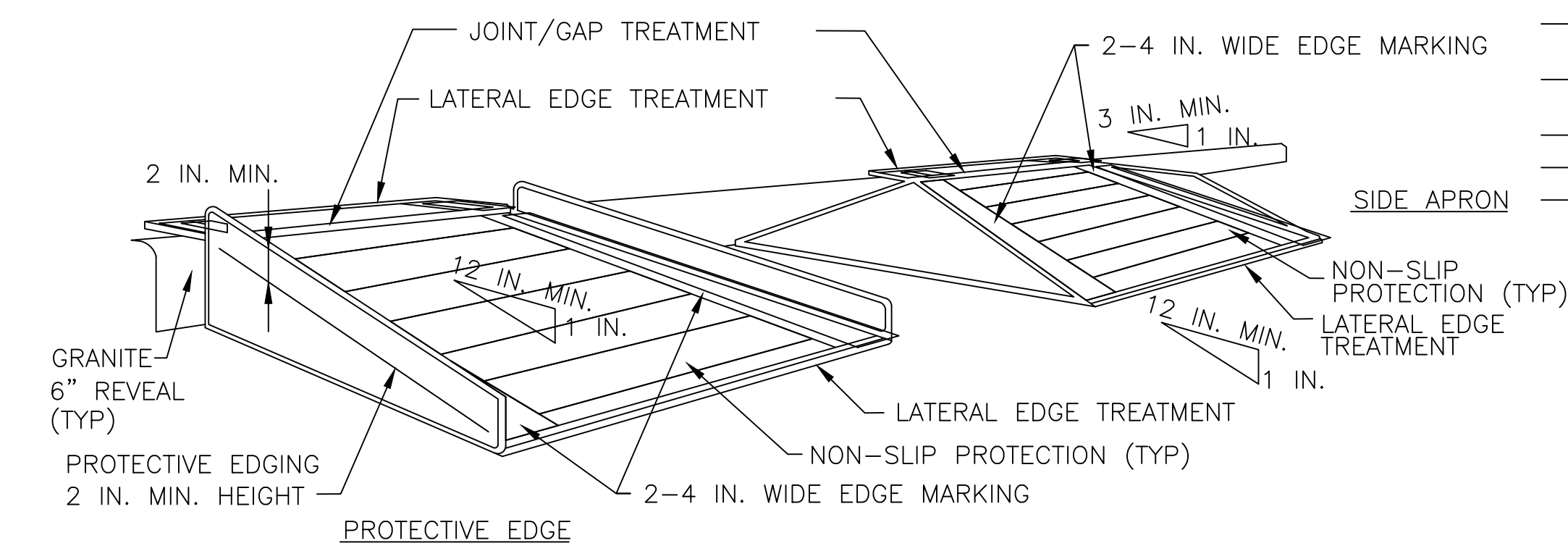
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	31	57
PROJECT FILE NO. N/A (ACCESS PERMIT)			

NOTES:

- CURB RAMP SHALL BE 60 IN. MINIMUM WIDTH WITH A FIRM, STABLE AND NON-SLIP SURFACE.
- PROTECTIVE EDGING WITH A 2 IN. MINIMUM HEIGHT SHALL BE INSTALLED WHEN THE CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6 IN. OR GREATER OR HAS A SIDE APRON SLOP STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN THE CURB RAMP OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3 IN. OR MORE.
- DETECTABLE EDGING WITH 6 IN. MINIMUM HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
- CURB RAMP AND LANDINGS SHOULD HAVE A 1:50 (2%) MAX CROSS-SLOPE.
- CLEAR SPACE OF 48x48 IN. MINIMUM SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.
- THE CURB RAMP WALKWAY EDGE SHALL BE MARKED WITH A CONTRASTING COLOR 2 TO 4 IN. WIDE MARKING. THE MARKING IS OPTIONAL WHERE COLOR CONTRASTING EDGING IS USED.
- WATER FLOW IN THE GUTTER SYSTEM SHALL HAVE MINIMAL RESTRICTION.
- LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 0.5 IN. WIDTH.
- CHANGES BETWEEN SURFACE HEIGHTS SHOULD NOT EXCEED 0.5 IN. LATERAL EDGES SHOULD BE VERTICAL UP TO 0.25 IN. HIGH, AND BEVELED AT 1:2 BETWEEN 0.25 IN. AND 0.5 IN. HEIGHT.



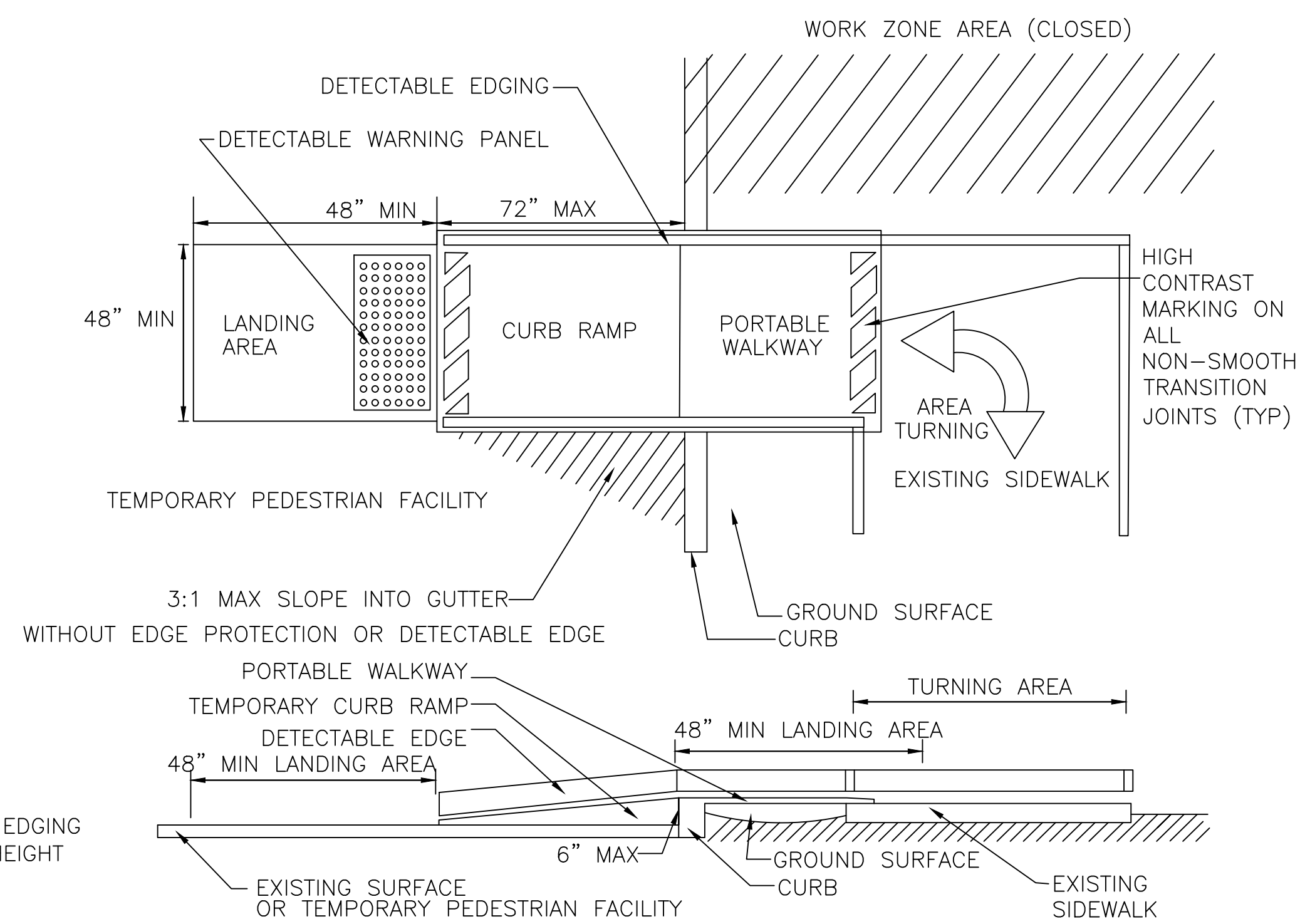
TEMPORARY CURB RAMP-PARALLEL TO CURB



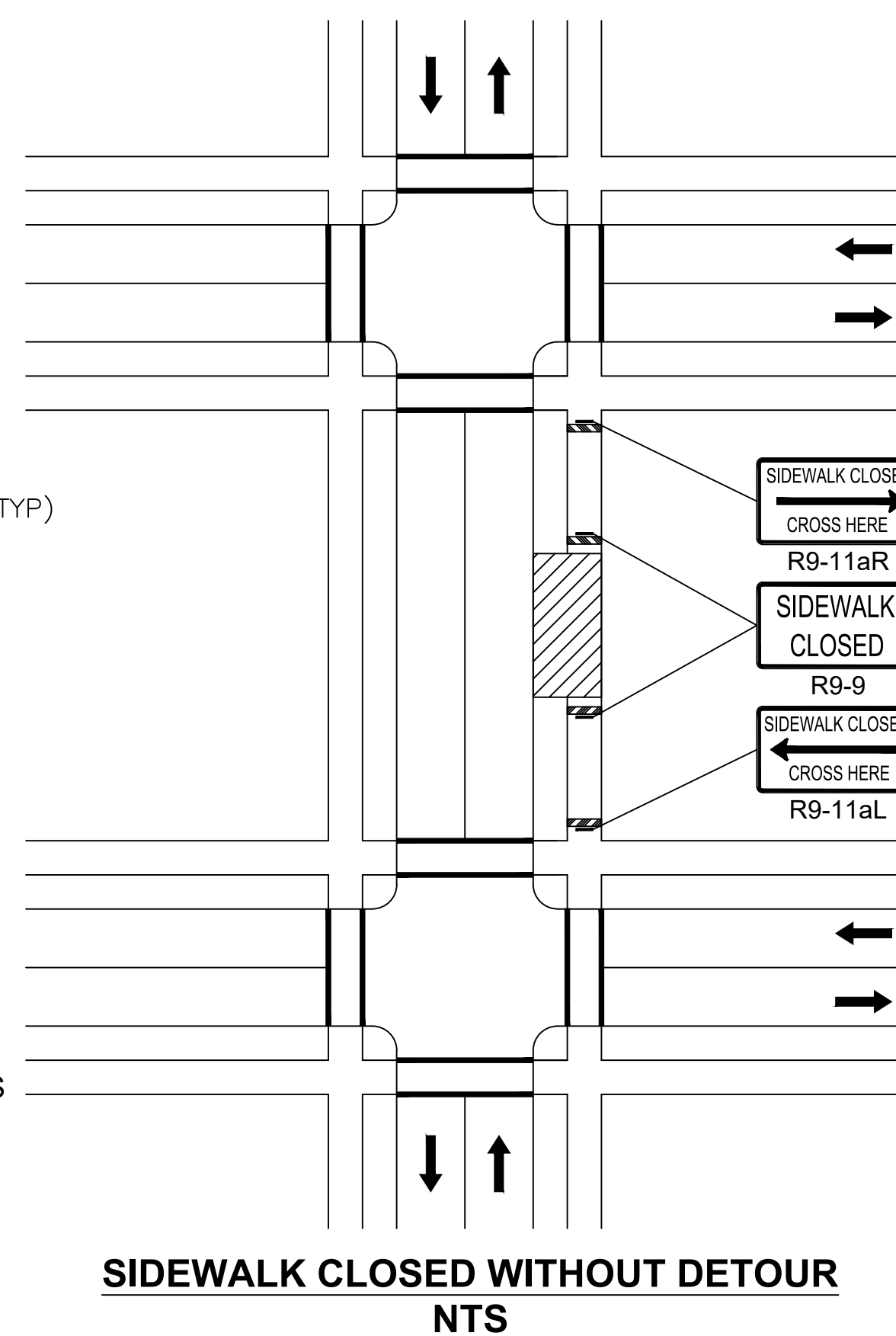
TEMPORARY CURB RAMP-PERPENDICULAR TO CURB

NOTE:

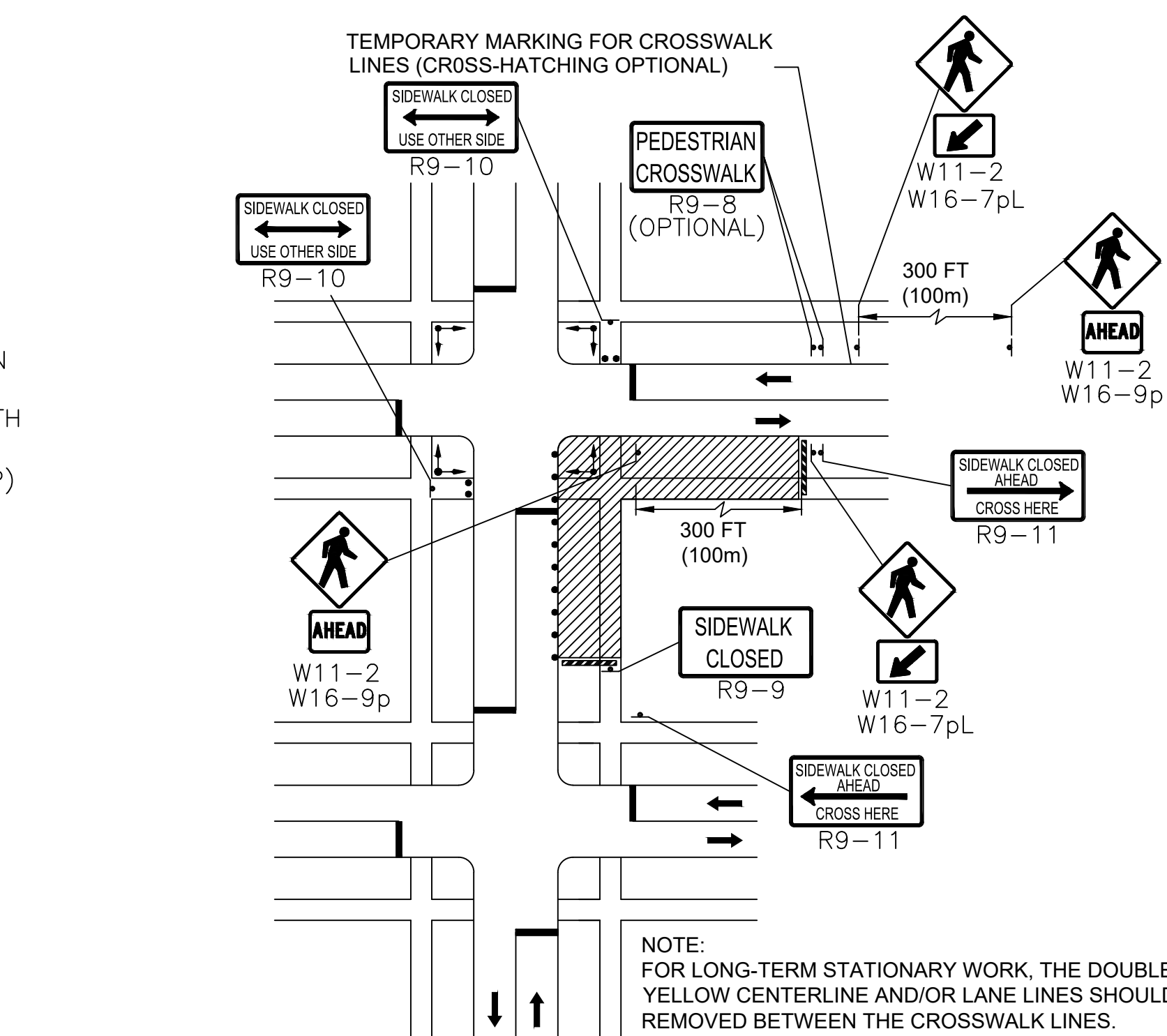
IF A MINIMUM WIDTH OF 48" OF SOLID SMOOTH UNOBSTRUCTED SURFACE REMAINS ALONG THE WORK AREA THEN THE DETAIL CAN BE DISREGARDED. DELINEATION OF THE WORK AREA WILL STILL BE REQUIRED. ALL PEDESTRIAN DETOUR ROUTES SHALL BE ADA/MAAB COMPLIANT IN THEIR ENTIRETY.



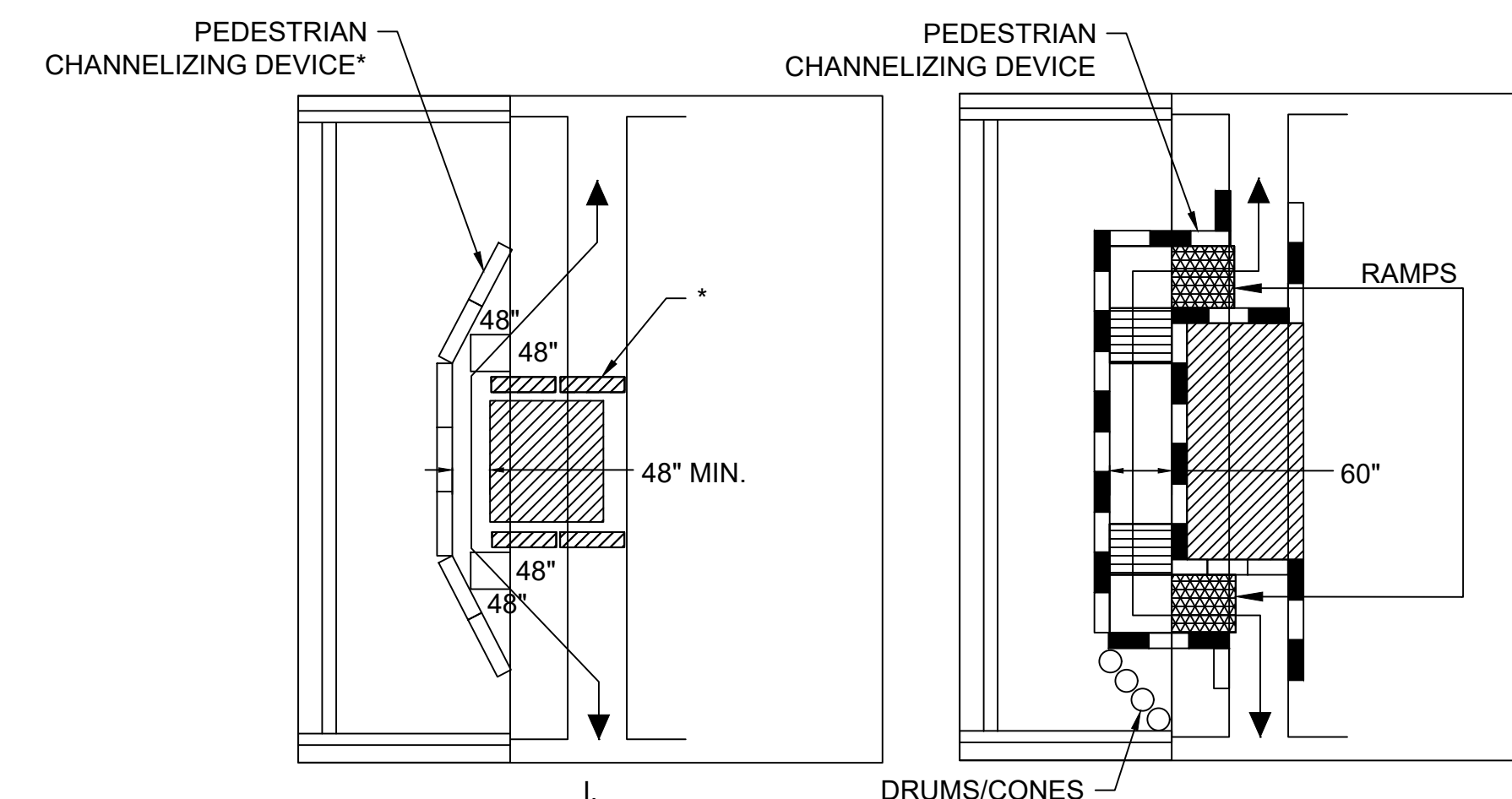
TEMPORARY CURB RAMP-TYPE 2
NTS



SIDEWALK CLOSED WITHOUT DETOUR
NTS



NOTE:
FOR LONG-TERM STATIONARY WORK, THE DOUBLE YELLOW CENTERLINE AND/OR LANE LINES SHOULD BE REMOVED BETWEEN THE CROSSWALK LINES.



NTS
PEDESTRIAN DETAILS

- DETAIL I IS CONSIDERED AN EXAMPLE OF A SHORT TERM CLOSURE AND PEDESTRIAN ASSISTANCE (PERSONAL) TO NAVIGATE AROUND THE CLOSURE/WORK AREA COULD BE CONSIDERED AS AN OPTION IN PLACE OF PROVIDING ADA/AAB DEVICES. DETAIL II IS CONSIDERED AN EXAMPLE OF A LONG TERM CLOSURE THAT WOULD REQUIRE ADDITIONAL ADA/AAB COMPLIANT DEVICES. IF A SIDEWALK CLOSURE OR RESTRICTION LASTS FOR MORE THAN ONE (1) WORK SHIFT THEN ADA/AAB COMPLIANCE SHALL BE FOLLOWED.
- WHEN EXISTING PEDESTRIAN FACILITIES ARE DISRUPTED, CLOSED, OR RELOCATED IN A TTC ZONE, TEMPORARY FACILITIES SHALL BE PROVIDED AND THEY SHALL BE DETECTABLE AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH THE FEATURES PRESENT IN THE EXISTING PEDESTRIAN FACILITY.
- A PEDESTRIAN CHANNELIZING DEVICE THAT IS DETECTABLE BY A PERSON WITH A VISUAL DISABILITY TRAVELING WITH THE AID OF A LONG CANE SHALL BE PLACED ACROSS THE FULL WIDTH OF THE CLOSED SIDEWALK.
- WHEN USED, TEMPORARY RAMPS SHALL COMPLY WITH AMERICANS WITH DISABILITIES ACT.
- THE ALTERNATE PATHWAY SHOULD HAVE A SMOOTH CONTINUOUS HARD SURFACE FOR THE ENTIRE LENGTH OF THE TEMPORARY PEDESTRIAN FACILITY.
- THE TEMPORARY SIDEWALK SHOULD BE A MINIMUM OF 4 FEET WIDE. IF THE SIDEWALK EXCEEDS 200 FEET, THEN A 5 FOOT BY 5 FOOT PASSING ZONE SHALL BE PROVIDED.
- THE PROTECTIVE REQUIREMENTS OF A TTC SITUATION HAVE PRIORITY IN DETERMINING THE NEED FOR TEMPORARY TRAFFIC BARRIERS AND THEIR USE IN THIS SITUATION SHOULD BE BASED ON ENGINEERING JUDGMENT.
- CONTROLS ONLY FOR PEDESTRIAN TRAFFIC ARE SHOWN; VEHICULAR TRAFFIC SHOULD BE HANDLED AS SHOWN ELSEWHERE. THESE DETAILS ARE USED IN CONJUNCTION WITH THE PROPOSED LANE CLOSURE DETAILS AND DURING CONSTRUCTION STAGING AS DETERMINED BY THE ENGINEER.
- AUDIBLE INFORMATION DEVICES SHOULD BE CONSIDERED WHERE MIDBLOCK CLOSINGS AND CHANGED CROSSWALK AREAS CAUSE INADEQUATE COMMUNICATION TO BE PROVIDED TO PEDESTRIANS WHO HAVE VISUAL DISABILITIES.
- EXISTING AUDIBLE DEVICES NO LONGER APPLICABLE DUE TO CONSTRUCTION SHALL BE DISABLED.

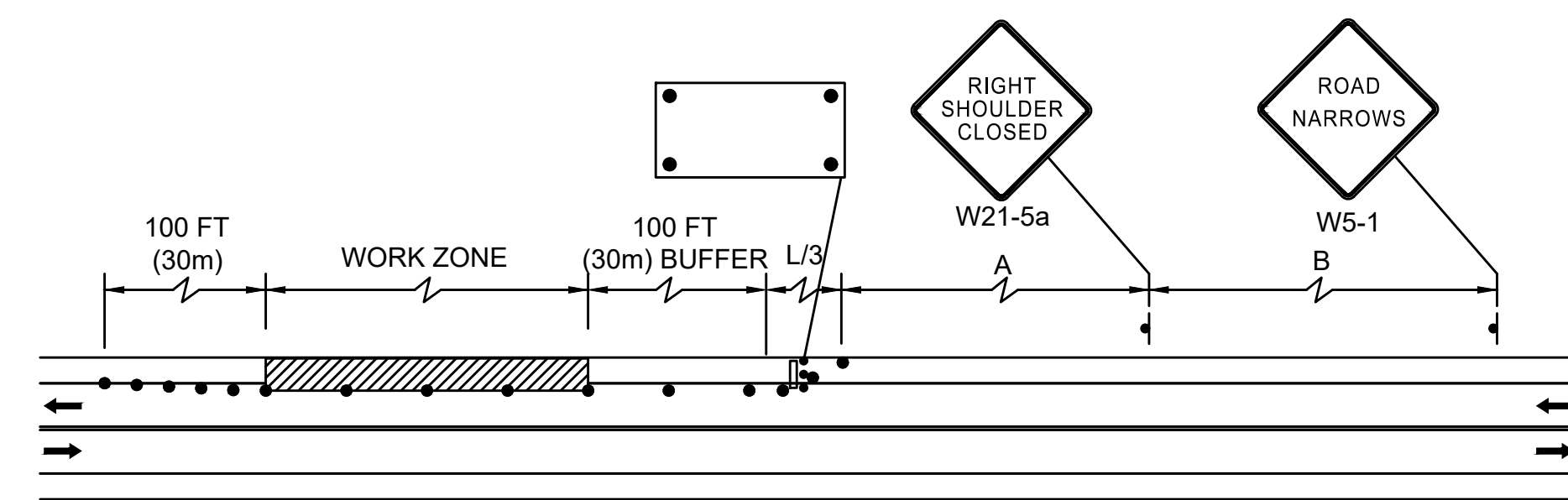
AUDIBLE DEVICES

FOR LONG TERM SIDEWALK CLOSURES (AT A MINIMUM OVERNIGHT) A FORM OF SPEECH MESSAGING FOR PEDESTRIANS WITH VISUAL DISABILITIES SHALL BE PROVIDED. AUDIBLE INFORMATION DEVICES SUCH AS DETECTABLE BARRIERS OR BARRICADES AND OTHER PASSIVE PEDESTRIAN ACTIVATION (MOTION ACTIVATED) DEVICES SHOULD BE CONSIDERED FOR THESE CASES. THESE AUDIBLE DEVICES CAN BE MOUNTABLE OR STAND ALONE.

MENDON
ROUTE 16

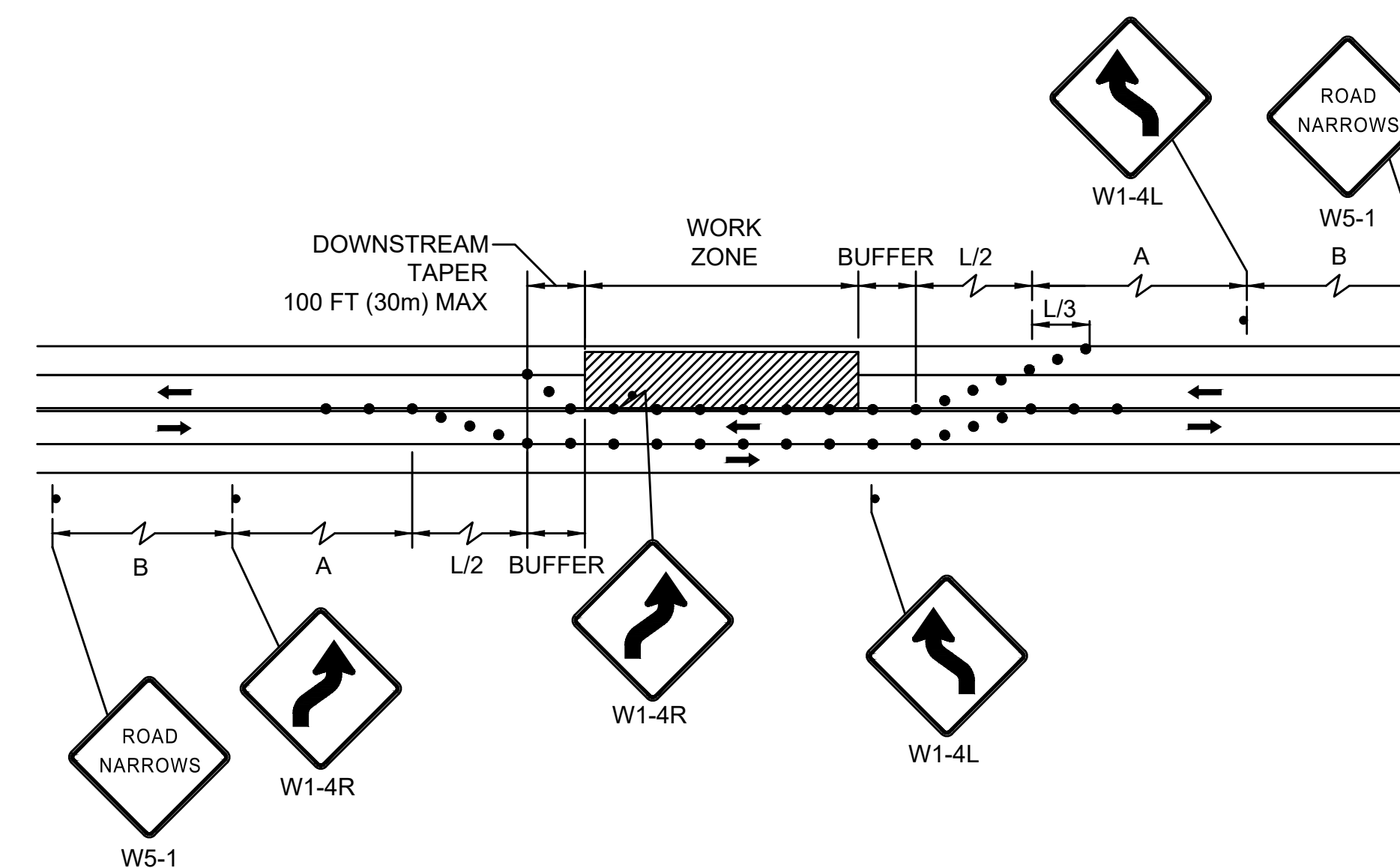
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	32	57
PROJECT FILE NO. N/A (ACCESS PERMIT)			

TEMPORARY TRAFFIC CONTROL PLANS
SHEET 3 OF 4



TWO LANE ROAD SHOULDER CLOSED

NTS



TWO LANE ROAD SHOULDER AND TRAVEL LANE CLOSED

NTS

CONSTRUCTION STAGING GENERAL NOTES

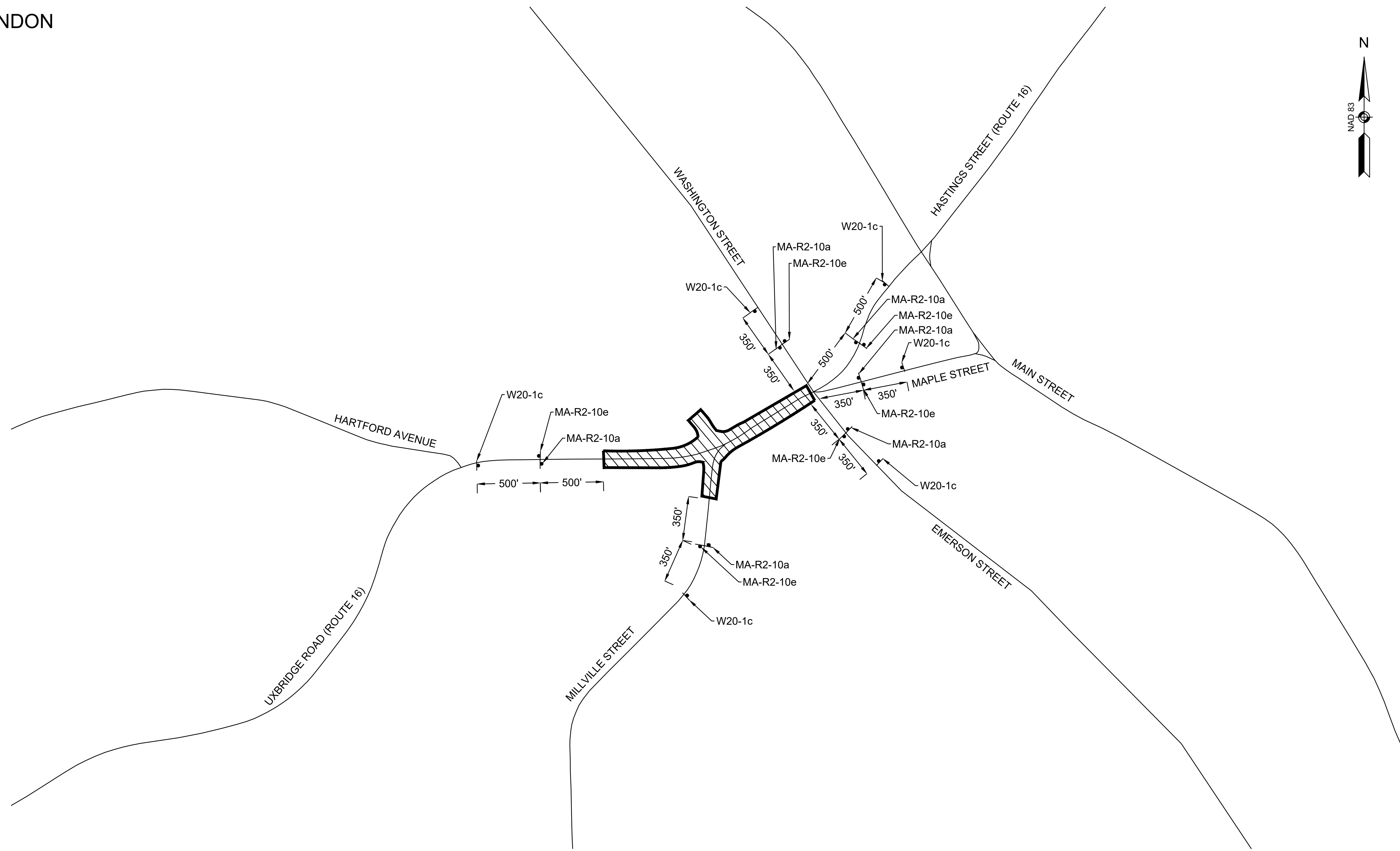
1. THE STAGING SHOWN ON THE PLANS REPRESENTS MAJOR WORK ELEMENTS AND SIGNIFICANT TRAFFIC MANAGEMENT ALTERATIONS FOR ONE ACCEPTABLE METHOD FOR CONSTRUCTING THE PROJECT WHILE MAINTAINING TRAFFIC. NOT ALL STAGES FOR ALL WORK ARE SHOWN NOR ARE THE STAGES SHOWN INTENDED TO BE EXCLUSIVE OF OTHER POSSIBLE COMBINATIONS OF TASKS OR ACCELERATION OF THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING THE WORK AND STAGING THE CONSTRUCTION TO MEET THE PROJECT SCHEDULE.
2. SOME WORK SHOWN ON THE CONSTRUCTION STAGING PLANS MAY BE CONDUCTED OVER SEVERAL STAGES, PRIOR TO THE COMMENCEMENT OF THE CONSTRUCTION STAGE IN WHICH IT IS SHOWN, OR SUBSEQUENT TO THE CONSTRUCTION STAGE IN WHICH IT IS SHOWN. THE CONTRACTOR SHALL MAKE HIS OWN DETERMINATION REGARDING THE START AND FINISH OF ALL TASKS.
3. THE INSTALLATION AND MAINTENANCE OF THE ROADWAY DRAINAGE SYSTEM MAY BE INDEPENDENT OF OTHER STAGING. NO ADDITIONAL COMPENSATION WILL BE MADE FOR DRAIN PIPE, DRAIN STRUCTURES, AND CONNECTIONS THAT MAY BE NEEDED ON A TEMPORARY BASIS TO MAINTAIN A DRAINAGE SYSTEM.
4. UTILITY RELOCATIONS AND ADJUSTMENTS SHALL BE MADE IN AS MANY STAGES AS REQUIRED AND AS DIRECTED BY THE ENGINEER TO MINIMIZE TRAFFIC IMPACTS.
5. UTILITY CASTINGS SHALL BE ADJUSTED TO FINAL GRADE PRIOR TO APPLICATION OF THE FINAL SURFACE COURSE. CASTINGS SHALL NOT BE SET TO A GRADE HIGHER THAN 2" ABOVE THE PAVEMENT AT ANY TIME. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE PAVEMENT AND CONSTRUCTING PATCHES THAT ARE UNIFORM WITH ADJACENT PAVEMENT IF REQUIRED IN COORDINATION WITH UTILITY COMPANY PAVEMENT EXCAVATION AND CASTING ADJUSTMENTS.
6. WORK DURING PERIODS OF LOW TRAFFIC VOLUMES AT NIGHT MAY BE REQUIRED FOR SOME WORK. NIGHT WORK MAY BE REQUIRED TO MEET THE PROJECT SCHEDULE AND TO MINIMIZE TRAFFIC IMPACTS.
7. TEMPORARY PAVEMENT SHALL BE CONSTRUCTED TO TRANSITION THE GRADE BETWEEN PROPOSED WORK AND EXISTING ROADWAYS WITH PAYMENT UNDER APPLICABLE PAVEMENT ITEMS. THE LOCATIONS AND EXTENT OF TEMPORARY PAVEMENT GRADE TRANSITIONS SHALL BE DETERMINED AS WORK PROGRESSES AND SHALL BE APPROVED BY THE ENGINEER PRIOR TO WORK.
8. CONSTRUCTION SIGNING AND PAVEMENT MARKINGS SHALL BE MAINTAINED UNTIL WORK UNDER EACH STAGE IS COMPLETED. ALTERATIONS TO CONSTRUCTION SIGNING AND PAVEMENT MARKINGS, INCLUDING REMOVAL, REAPPLICATION (AS REQUIRED FOR VISIBILITY) AND ADJUSTMENT IN LOCATION SHALL BE MADE AT THE BEGINNING OF THE NEXT CONSTRUCTION STAGE AS REQUIRED TO CONFORM WITH THE TRAFFIC MANAGEMENT PLANS AND AS DIRECTED BY THE ENGINEER. PAVEMENT MARKINGS SHALL BE EXTENDED, LOCATIONS ADJUSTED, WIDTHS INCREASED AND DECREASED AND COLORS ALTERED TO MATCH WITH EXISTING MARKINGS AND TO CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES IN ALL STAGES.
9. THE TRAFFIC MANAGEMENT PLANS FOR CONSTRUCTION STAGING DO NOT ILLUSTRATE ALL TYPICAL STANDARD TRAFFIC MANAGEMENT DETAILS THAT WILL BE REQUIRED FOR SOME WORK. THE CONTRACTOR SHALL REFER TO TYPICAL TRAFFIC MANAGEMENT DETAILS THAT ARE PROVIDED FOR LANE CLOSURE, SHOULDER CLOSURE, ADVANCE SIGNING, ETC.
10. EXISTING STREET LIGHTING SHALL BE RETAINED WITHIN THE WORK LIMITS FOR THE LONGEST PRACTICABLE PERIOD UNTIL THE WORK REQUIRES ITS REMOVAL.
11. ADVISORY SPEED LIMITS, IF NECESSARY, SHALL BE DETERMINED BY THE ENGINEER.
12. EXISTING CONFLICTING PAVEMENT MARKINGS SHALL BE REMOVED BY AN APPROVED METHOD.
13. THE ADVANCE WARNING SIGNING PLAN SHALL REMAIN IN PLACE THROUGHOUT THE DURATION OF THE CONSTRUCTION PHASE.
14. TEMPORARY HMA PAVEMENT RAMPS GRADED AT NO MORE THAN 1:12 LONGITUDINAL SLOPES AND 1:4 LATERAL SLOPES SHALL BE CONSTRUCTED TO MAINTAIN TRAFFIC AT LOCATIONS WITH GRADE DIFFERENTIAL.

**MENDON
ROUTE 16**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	33	57
PROJECT FILE NO. N/A (ACCESS PERMIT)			

TEMPORARY TRAFFIC CONTROL PLANS
SHEET 4 OF 4

MENDON

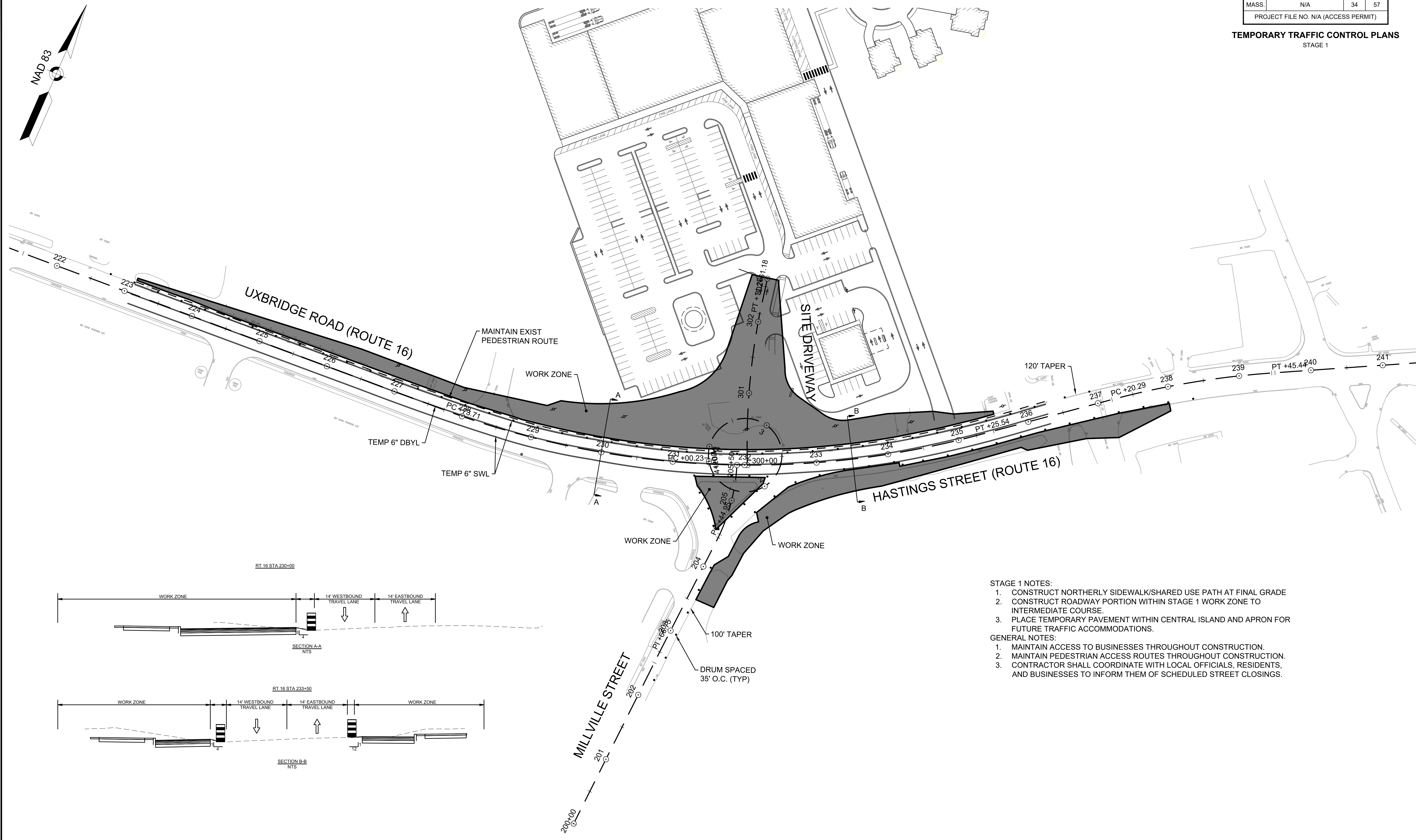
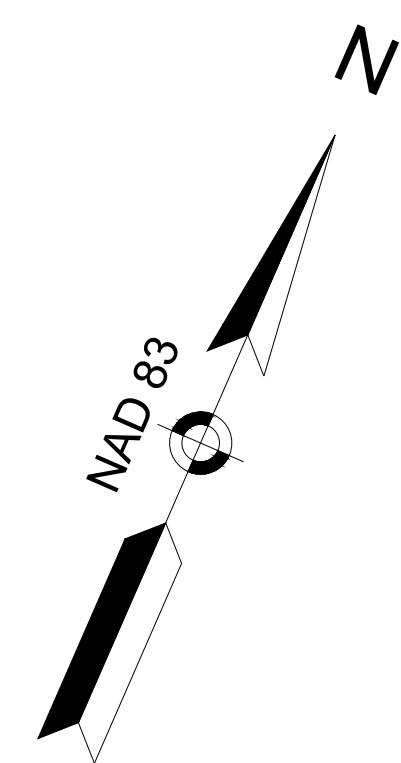


ADVANCE WARNING SIGN DETAIL
NTS

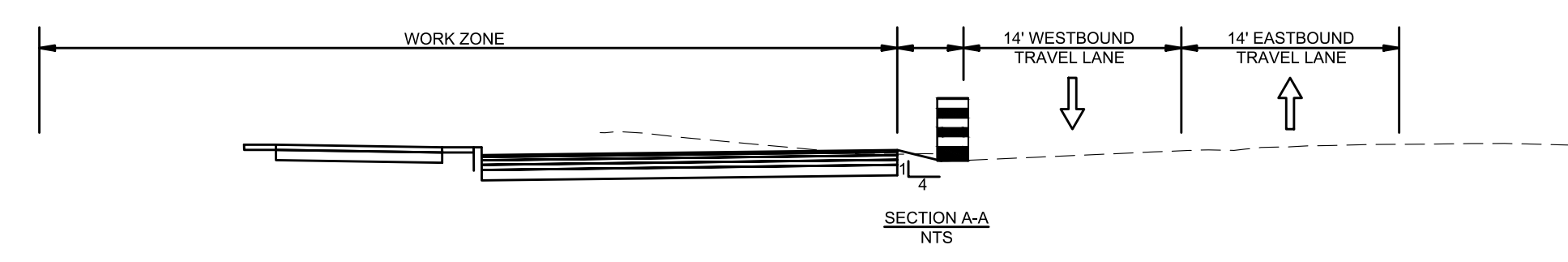
**MENDON
ROUTE 16**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	34	57
PROJECT FILE NO. N/A (ACCESS PERMIT)			

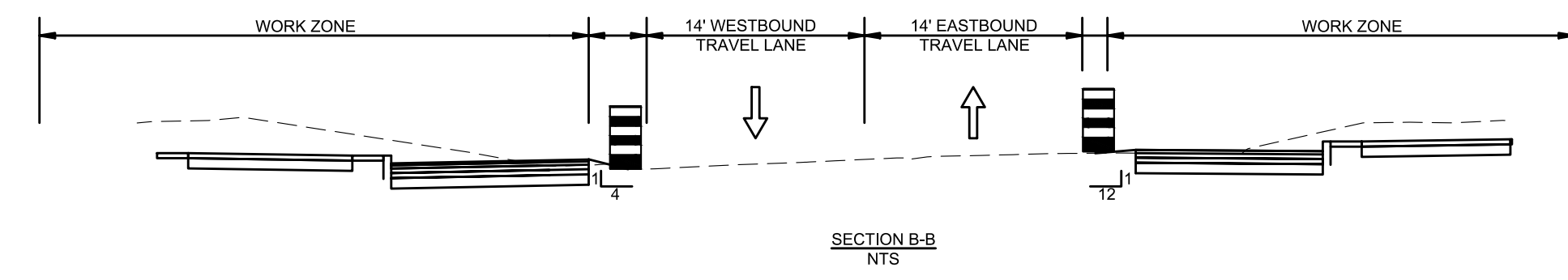
**TEMPORARY TRAFFIC CONTROL PLANS
STAGE 1**



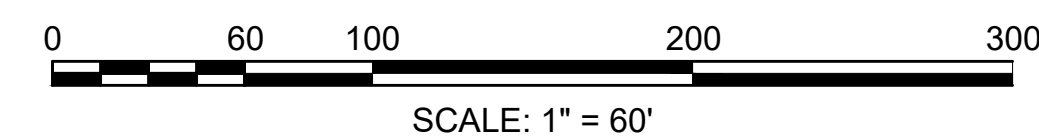
RT 16 STA 230+00



RT 16 STA 233+50



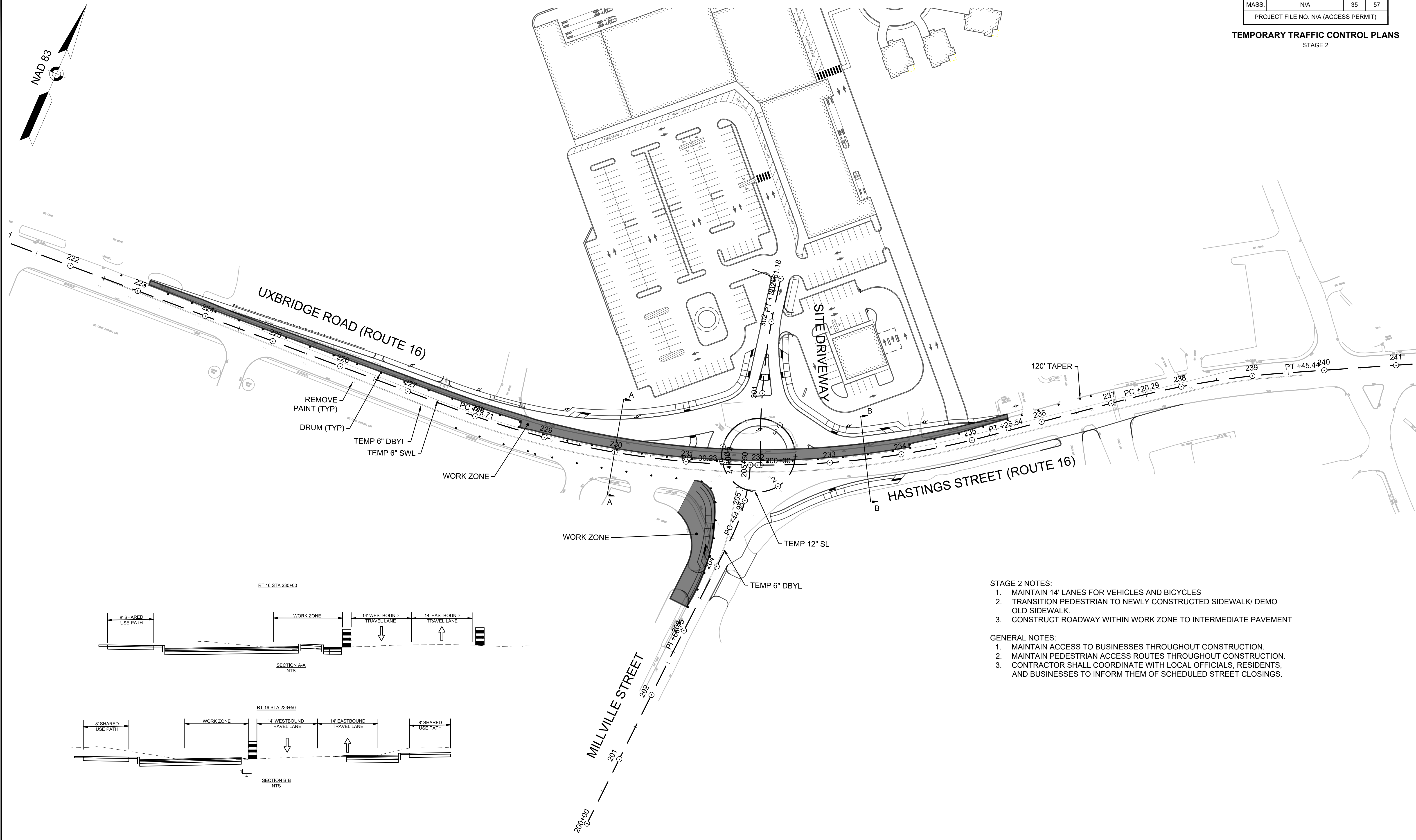
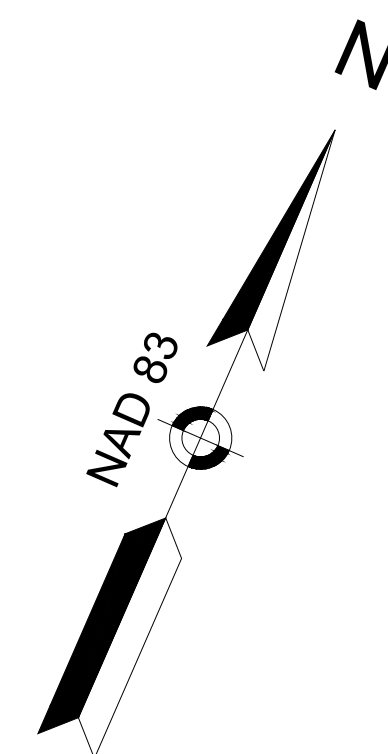
- STAGE 1 NOTES:**
1. CONSTRUCT NORTHERLY SIDEWALK/SHARED USE PATH AT FINAL GRADE
 2. CONSTRUCT ROADWAY PORTION WITHIN STAGE 1 WORK ZONE TO INTERMEDIATE COURSE.
 3. PLACE TEMPORARY PAVEMENT WITHIN CENTRAL ISLAND AND APRON FOR FUTURE TRAFFIC ACCOMMODATIONS.
- GENERAL NOTES:**
1. MAINTAIN ACCESS TO BUSINESSES THROUGHOUT CONSTRUCTION.
 2. MAINTAIN PEDESTRIAN ACCESS ROUTES THROUGHOUT CONSTRUCTION.
 3. CONTRACTOR SHALL COORDINATE WITH LOCAL OFFICIALS, RESIDENTS, AND BUSINESSES TO INFORM THEM OF SCHEDULED STREET CLOSINGS.



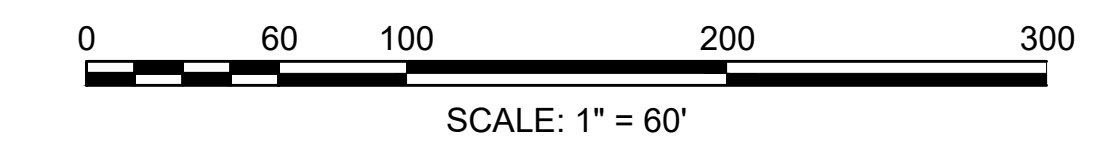
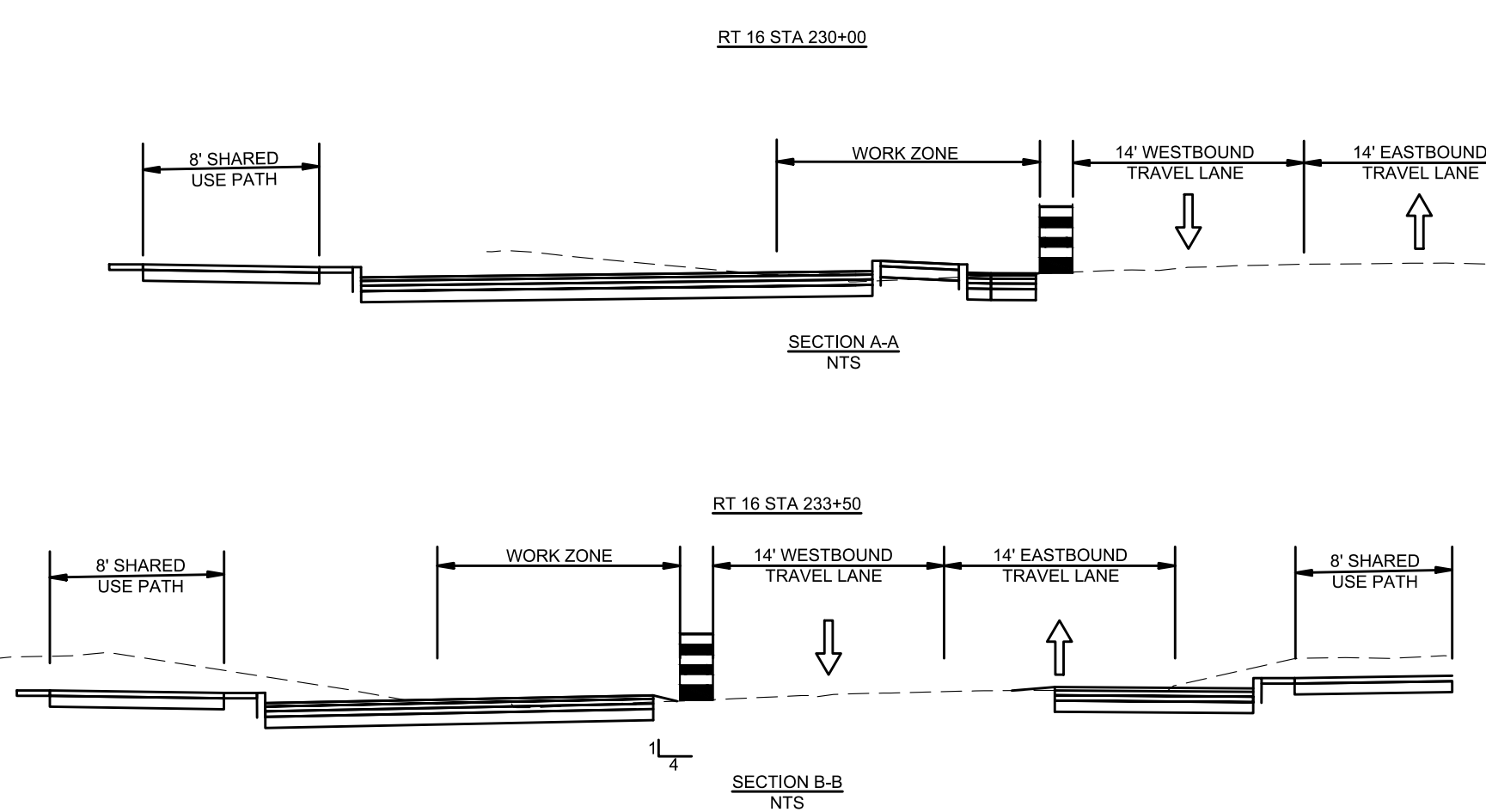
**MENDON
ROUTE 16**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	35	57
PROJECT FILE NO. N/A (ACCESS PERMIT)			

**TEMPORARY TRAFFIC CONTROL PLANS
STAGE 2**



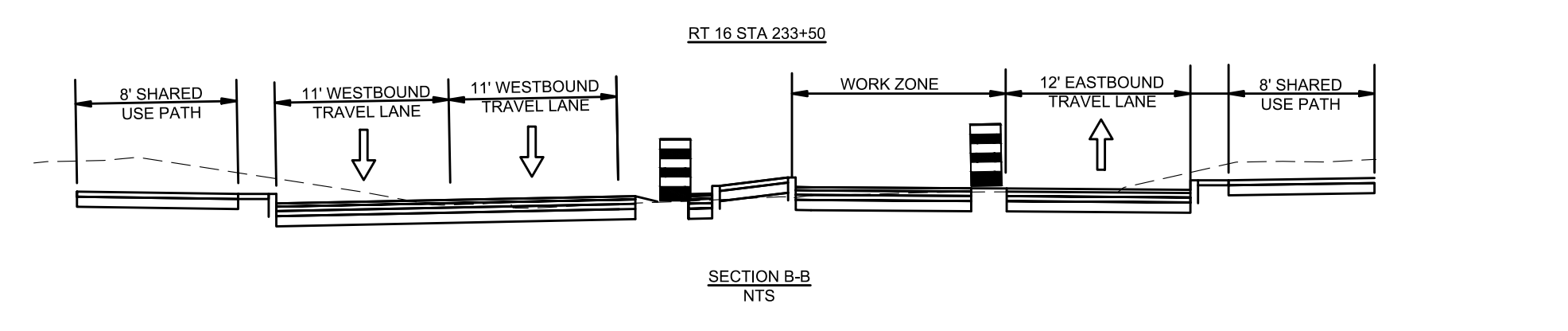
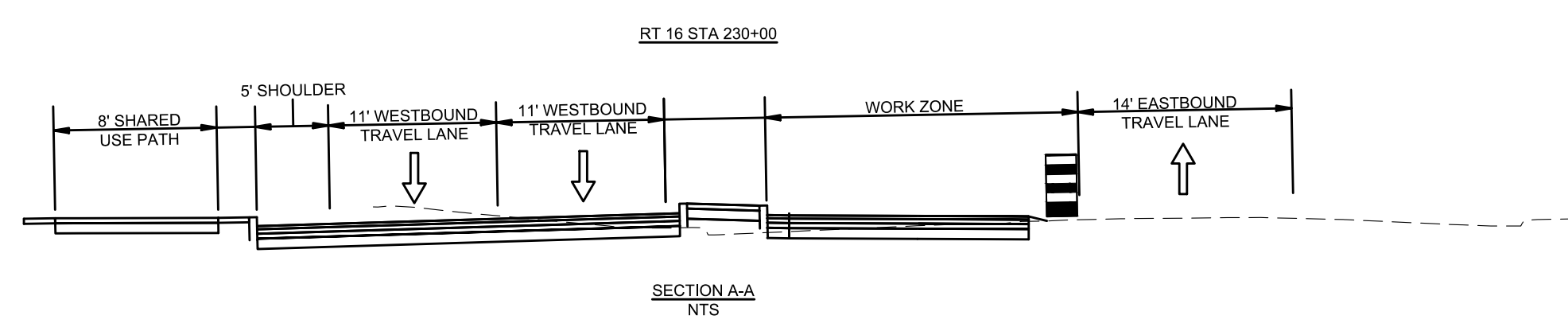
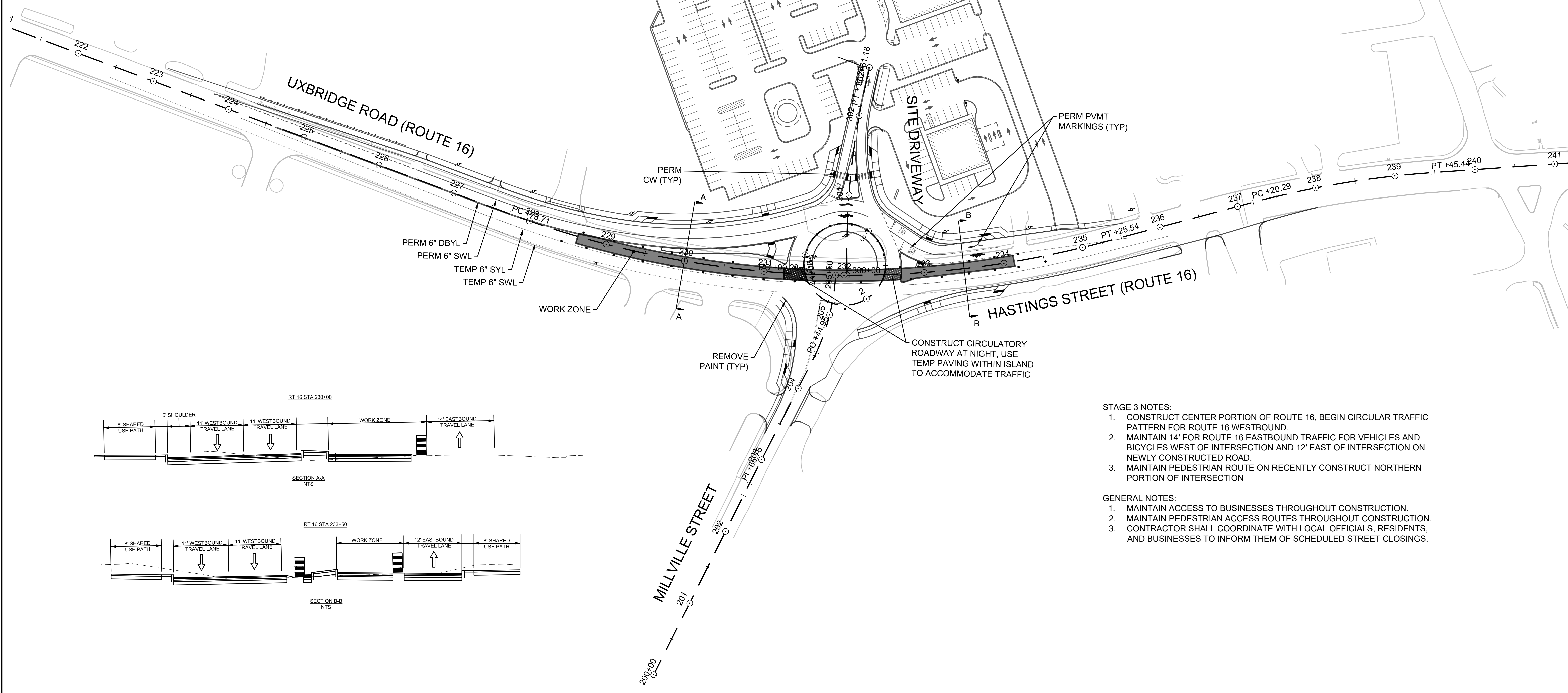
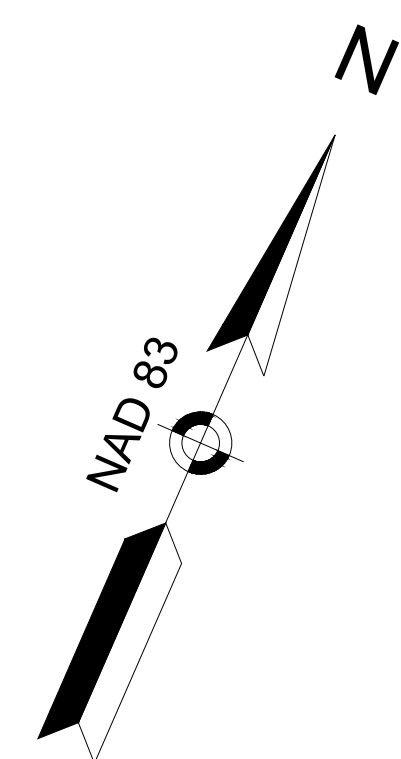
- STAGE 2 NOTES:**
1. MAINTAIN 14' LANES FOR VEHICLES AND BICYCLES
 2. TRANSITION PEDESTRIAN TO NEWLY CONSTRUCTED SIDEWALK/ DEMO OLD SIDEWALK.
 3. CONSTRUCT ROADWAY WITHIN WORK ZONE TO INTERMEDIATE PAVEMENT
- GENERAL NOTES:**
1. MAINTAIN ACCESS TO BUSINESSES THROUGHOUT CONSTRUCTION.
 2. MAINTAIN PEDESTRIAN ACCESS ROUTES THROUGHOUT CONSTRUCTION.
 3. CONTRACTOR SHALL COORDINATE WITH LOCAL OFFICIALS, RESIDENTS, AND BUSINESSES TO INFORM THEM OF SCHEDULED STREET CLOSINGS.



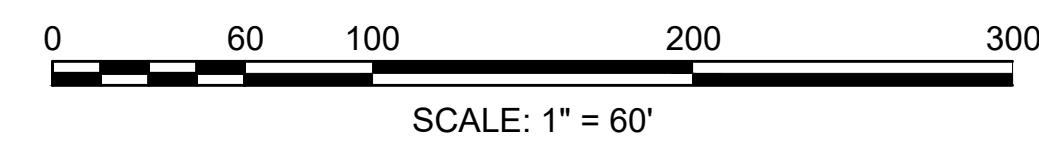
MENDON
ROUTE 16

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	36	57
PROJECT FILE NO. N/A (ACCESS PERMIT)			

TEMPORARY TRAFFIC CONTROL PLANS
STAGE 3



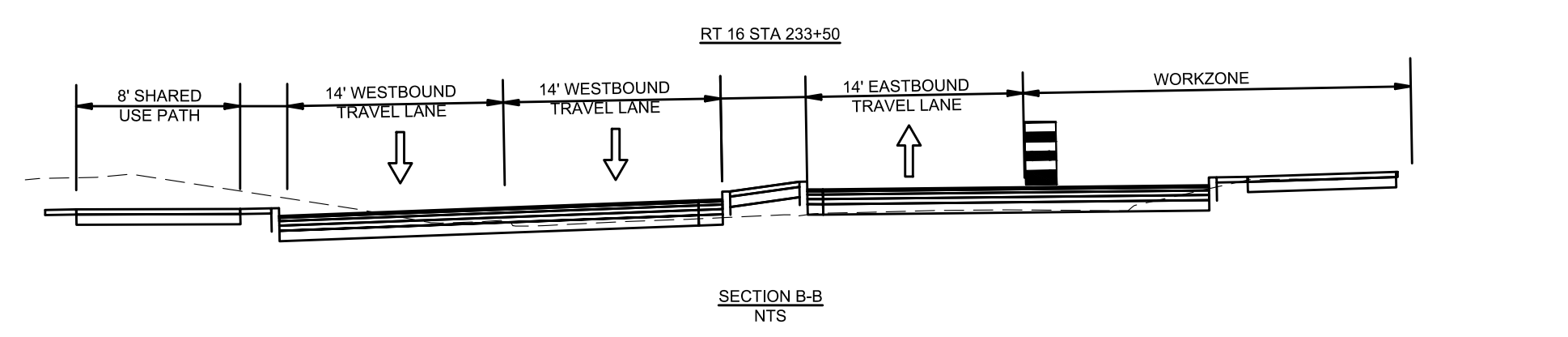
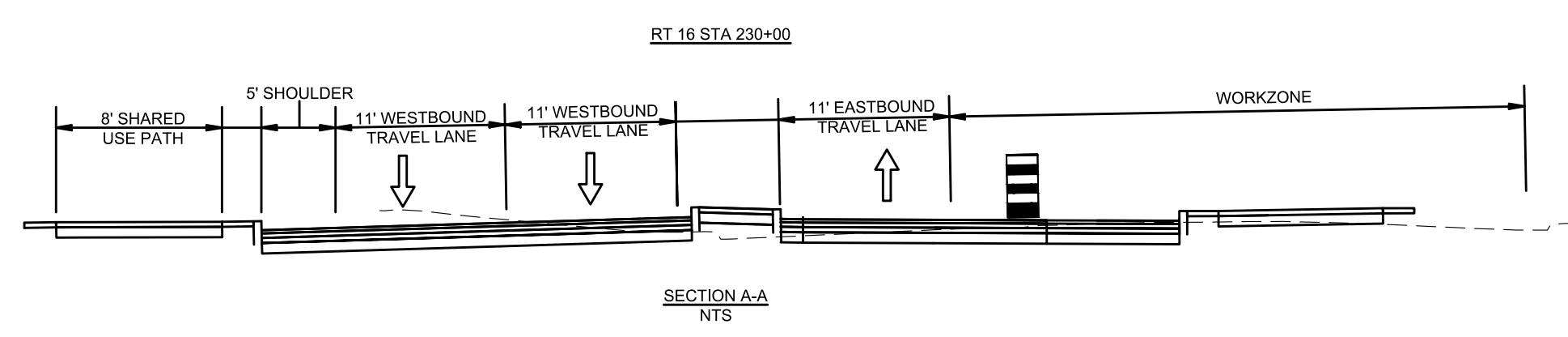
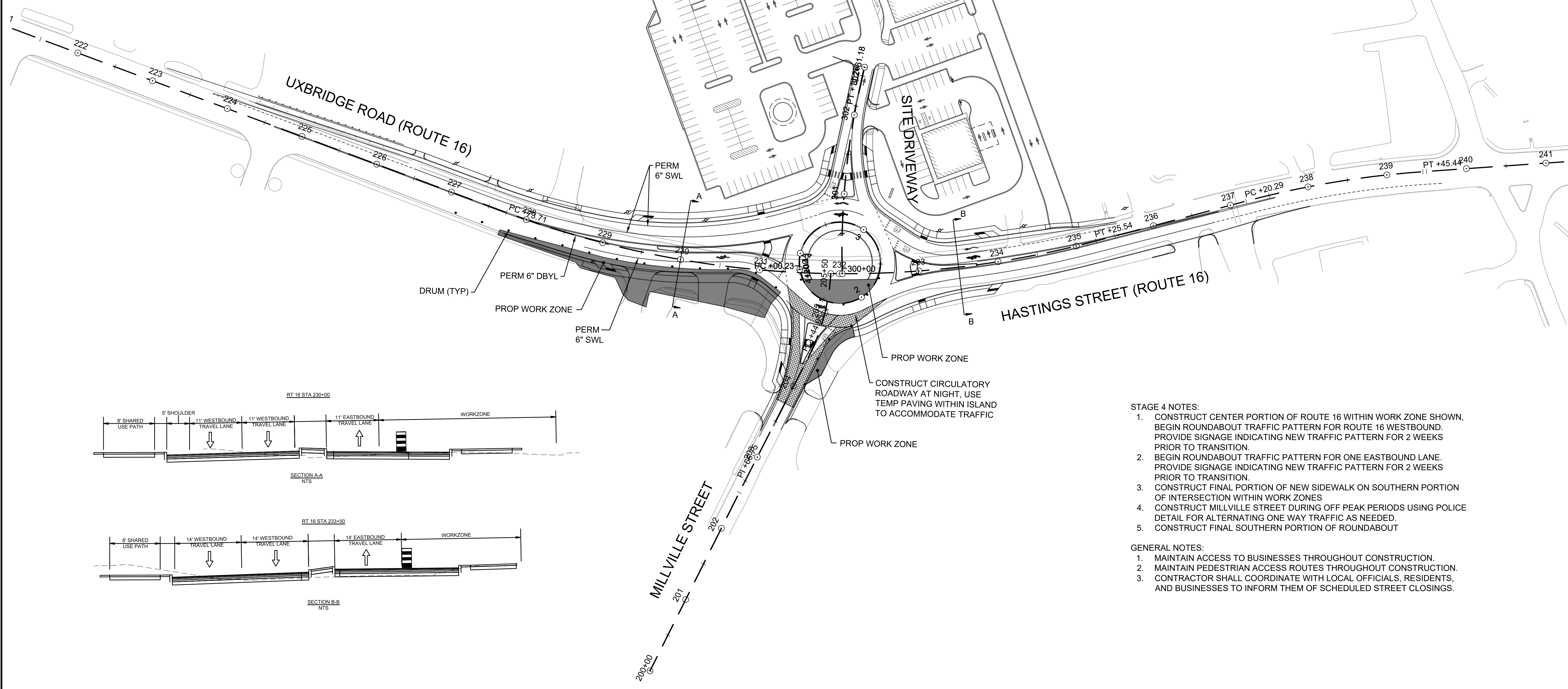
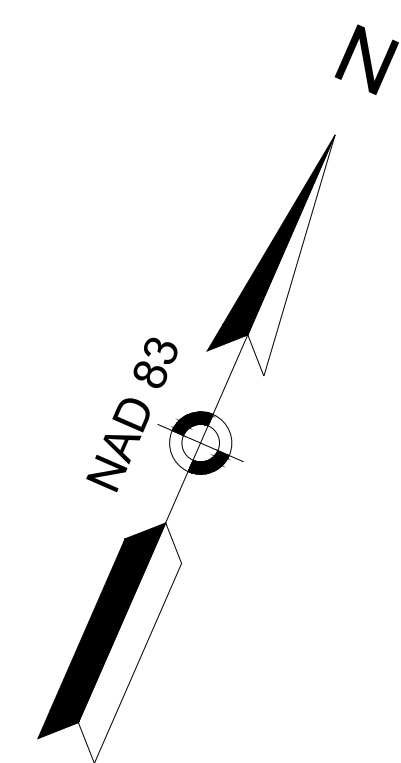
- STAGE 3 NOTES:
1. CONSTRUCT CENTER PORTION OF ROUTE 16, BEGIN CIRCULAR TRAFFIC PATTERN FOR ROUTE 16 WESTBOUND.
 2. MAINTAIN 14' FOR ROUTE 16 EASTBOUND TRAFFIC FOR VEHICLES AND BICYCLES WEST OF INTERSECTION AND 12' EAST OF INTERSECTION ON NEWLY CONSTRUCTED ROAD.
 3. MAINTAIN PEDESTRIAN ROUTE ON RECENTLY CONSTRUCT NORTHERN PORTION OF INTERSECTION
- GENERAL NOTES:
1. MAINTAIN ACCESS TO BUSINESSES THROUGHOUT CONSTRUCTION.
 2. MAINTAIN PEDESTRIAN ACCESS ROUTES THROUGHOUT CONSTRUCTION.
 3. CONTRACTOR SHALL COORDINATE WITH LOCAL OFFICIALS, RESIDENTS, AND BUSINESSES TO INFORM THEM OF SCHEDULED STREET CLOSINGS.



**MENDON
ROUTE 16**

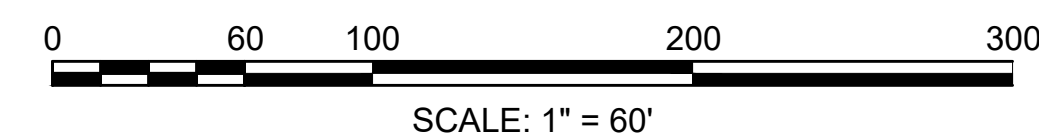
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	37	57
PROJECT FILE NO. N/A (ACCESS PERMIT)			

**TEMPORARY TRAFFIC CONTROL PLANS
STAGE 4**



- STAGE 4 NOTES:**
1. CONSTRUCT CENTER PORTION OF ROUTE 16 WITHIN WORK ZONE SHOWN. BEGIN ROUNDABOUT TRAFFIC PATTERN FOR ROUTE 16 WESTBOUND. PROVIDE SIGNAGE INDICATING NEW TRAFFIC PATTERN FOR 2 WEEKS PRIOR TO TRANSITION.
 2. BEGIN ROUNDABOUT TRAFFIC PATTERN FOR ONE EASTBOUND LANE. PROVIDE SIGNAGE INDICATING NEW TRAFFIC PATTERN FOR 2 WEEKS PRIOR TO TRANSITION.
 3. CONSTRUCT FINAL PORTION OF NEW SIDEWALK ON SOUTHERN PORTION OF INTERSECTION WITHIN WORK ZONES
 4. CONSTRUCT MILLVILLE STREET DURING OFF PEAK PERIODS USING POLICE DETAIL FOR ALTERNATING ONE WAY TRAFFIC AS NEEDED.
 5. CONSTRUCT FINAL SOUTHERN PORTION OF ROUNDABOUT

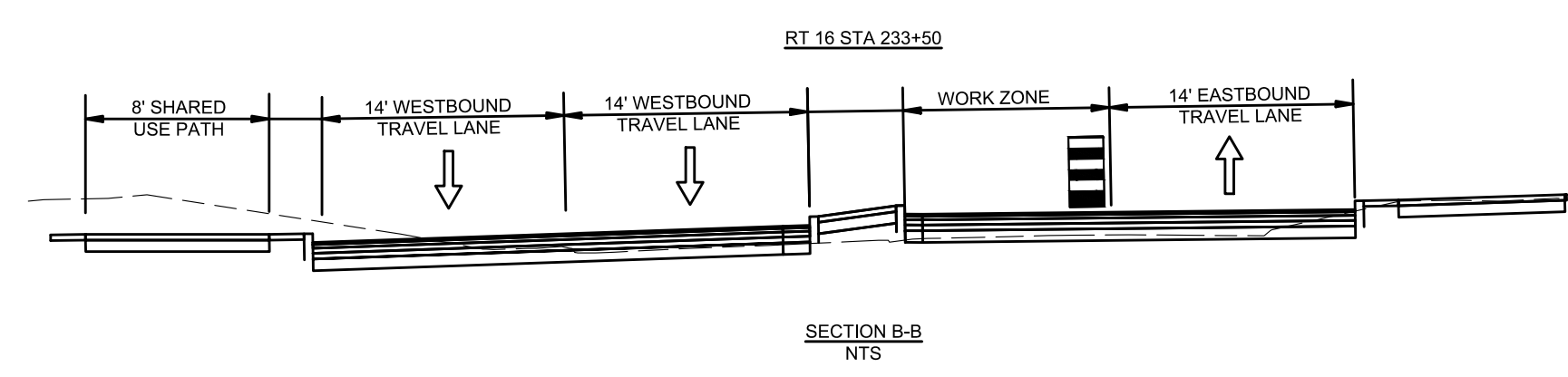
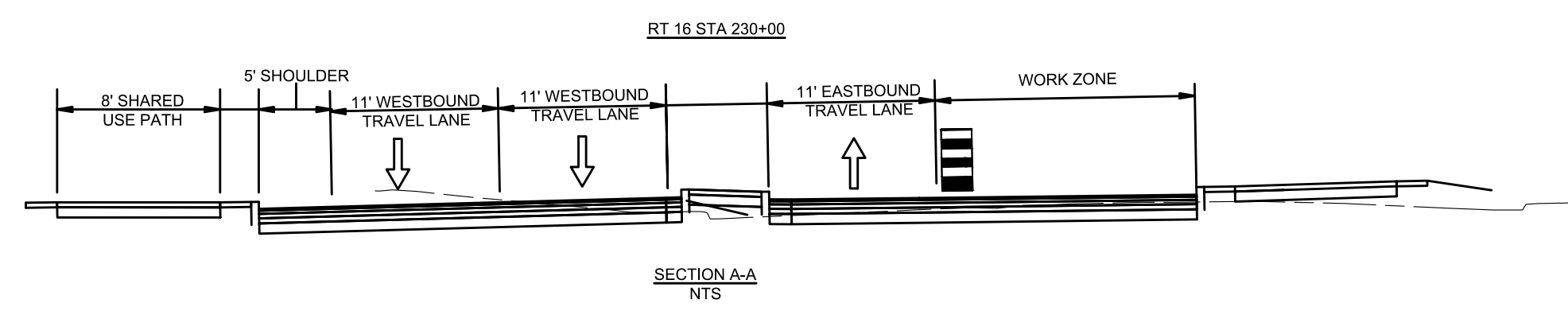
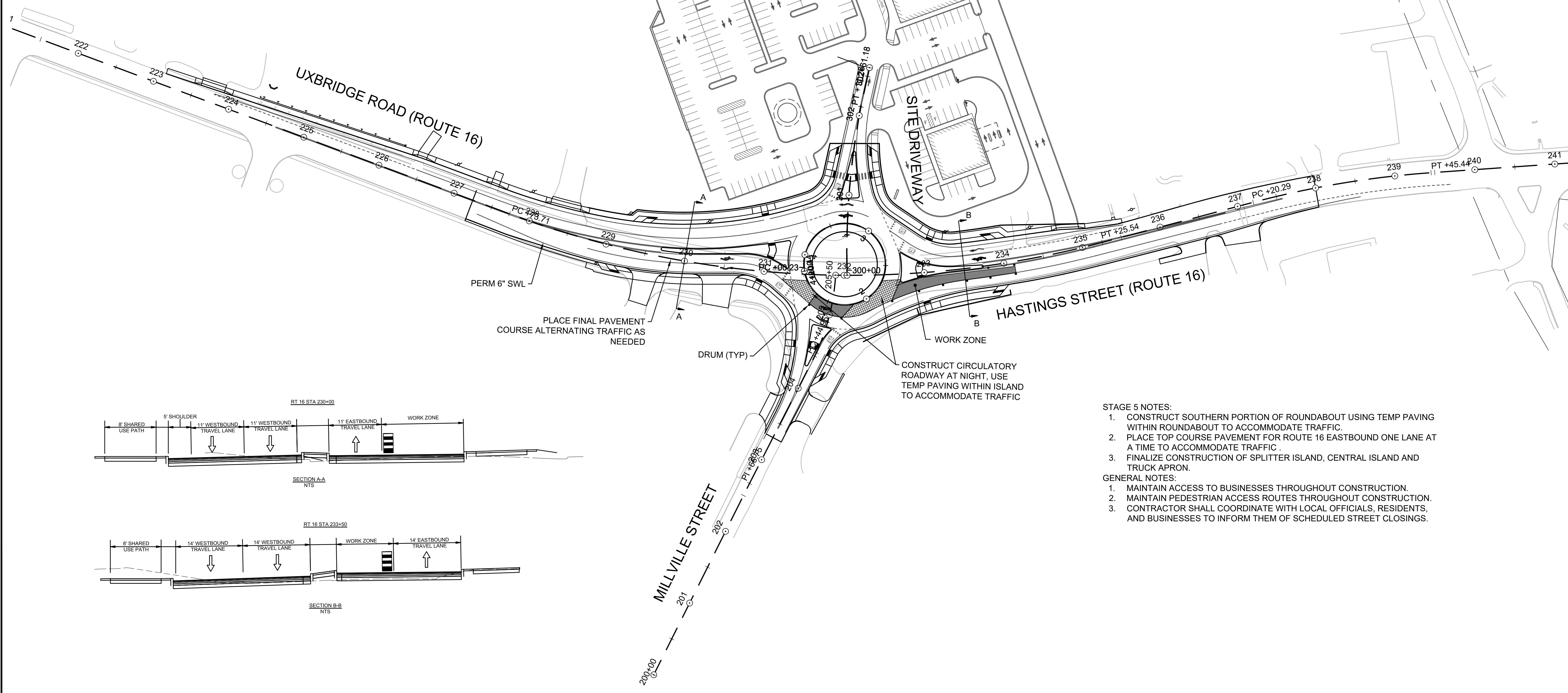
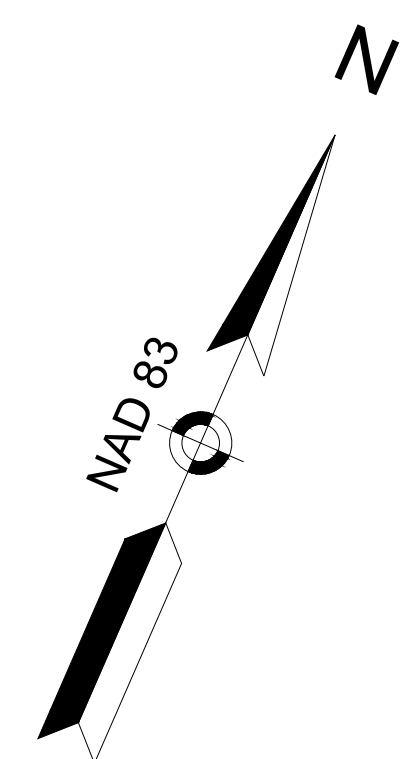
- GENERAL NOTES:**
1. MAINTAIN ACCESS TO BUSINESSES THROUGHOUT CONSTRUCTION.
 2. MAINTAIN PEDESTRIAN ACCESS ROUTES THROUGHOUT CONSTRUCTION.
 3. CONTRACTOR SHALL COORDINATE WITH LOCAL OFFICIALS, RESIDENTS, AND BUSINESSES TO INFORM THEM OF SCHEDULED STREET CLOSINGS.



MENDON
ROUTE 16

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	38	57
PROJECT FILE NO. N/A (ACCESS PERMIT)			

TEMPORARY TRAFFIC CONTROL PLANS
STAGE 5

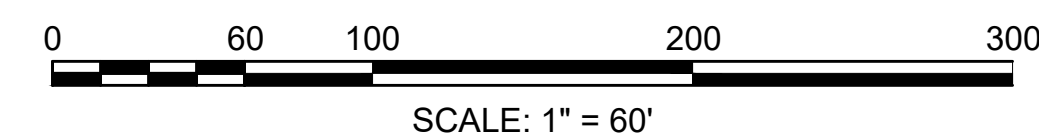


STAGE 5 NOTES:

1. CONSTRUCT SOUTHERN PORTION OF ROUNDABOUT USING TEMP PAVING WITHIN ROUNDABOUT TO ACCOMMODATE TRAFFIC.
2. PLACE TOP COURSE PAVEMENT FOR ROUTE 16 EASTBOUND ONE LANE AT A TIME TO ACCOMMODATE TRAFFIC.
3. FINALIZE CONSTRUCTION OF SPLITTER ISLAND, CENTRAL ISLAND AND TRUCK APRON.

GENERAL NOTES:

1. MAINTAIN ACCESS TO BUSINESSES THROUGHOUT CONSTRUCTION.
2. MAINTAIN PEDESTRIAN ACCESS ROUTES THROUGHOUT CONSTRUCTION.
3. CONTRACTOR SHALL COORDINATE WITH LOCAL OFFICIALS, RESIDENTS, AND BUSINESSES TO INFORM THEM OF SCHEDULED STREET CLOSINGS.

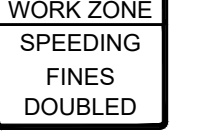
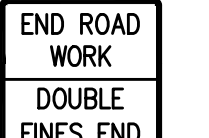

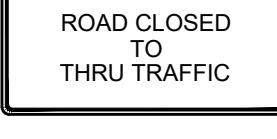

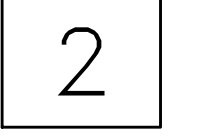






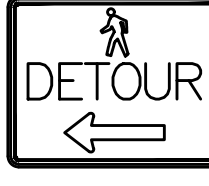
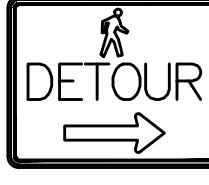




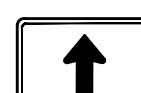
MENDON
ROUTE 16

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	39	57
PROJECT FILE NO. N/A (ACCESS PERMIT)			

CONSTRUCTION SIGN SUMMARY

CONSTRUCTION SIGN SUMMARY

IDENTIFICATION NUMBER	SIZE OF SIGN (INCHES)		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER			
MA-R2-10a	48	36		SEE MASSDOT STANDARD			X	FLUOR. ORANGE	BLACK	BLACK	-	12.00	X
MA-R2-10e	36	48		SEE MASSDOT STANDARD			X	FLUOR. ORANGE	BLACK	BLACK	-	12.00	X
R11-2	48	30		SEE 2009 MUTCD			X	WHITE	BLACK	BLACK	-	10.00	X
R11-4	18	30		SEE 2009 MUTCD			X	WHITE	BLACK	BLACK	-	3.75	X
W20-1c	36	36		SEE 2009 MUTCD			X	FLUOR-ESCENT ORANGE	BLACK	BLACK	-	9.00	X
M1-5(2)	36	36		SEE 2009 MUTCD			X	WHITE	BLACK	BLACK	-	9.00	X
M3-2	12	24		SEE 2009 MUTCD			X	WHITE	BLACK	BLACK	-	2.00	X
M3-4	12	24		SEE 2009 MUTCD			X	WHITE	BLACK	BLACK	-	2.00	X
M4-8	12	24		SEE 2009 MUTCD			X	WHITE	BLACK	BLACK	-	2.00	X
M4-8A	18	24		SEE 2009 MUTCD			X	WHITE	BLACK	BLACK	-	2.00	X

IDENTIFICATION NUMBER	SIZE OF SIGN (INCHES)		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER			
M4-9bL	30	24		SEE 2009 MUTCD			X	FLUOR-ESCENT ORANGE	BLACK	BLACK	*	5.00	X
M4-9bR	30	24		SEE 2009 MUTCD			X	FLUOR-ESCENT ORANGE	BLACK	BLACK	*	5.00	X
M4-10L	18	48		SEE 2009 MUTCD			X	WHITE	BLACK	BLACK	-	6.00	X
M4-10R	18	48		SEE 2009 MUTCD			X	WHITE	BLACK	BLACK	-	6.00	X
M6-1L	15	21		SEE 2009 MUTCD			X	WHITE	BLACK	BLACK	-	2.19	X
M6-1R	15	21		SEE 2009 MUTCD			X	WHITE	BLACK	BLACK	-	2.19	X
M6-3	15	21		SEE 2009 MUTCD			X	WHITE	BLACK	BLACK	-	2.19	X

TOTAL = XXX.XX SF

NOTES:

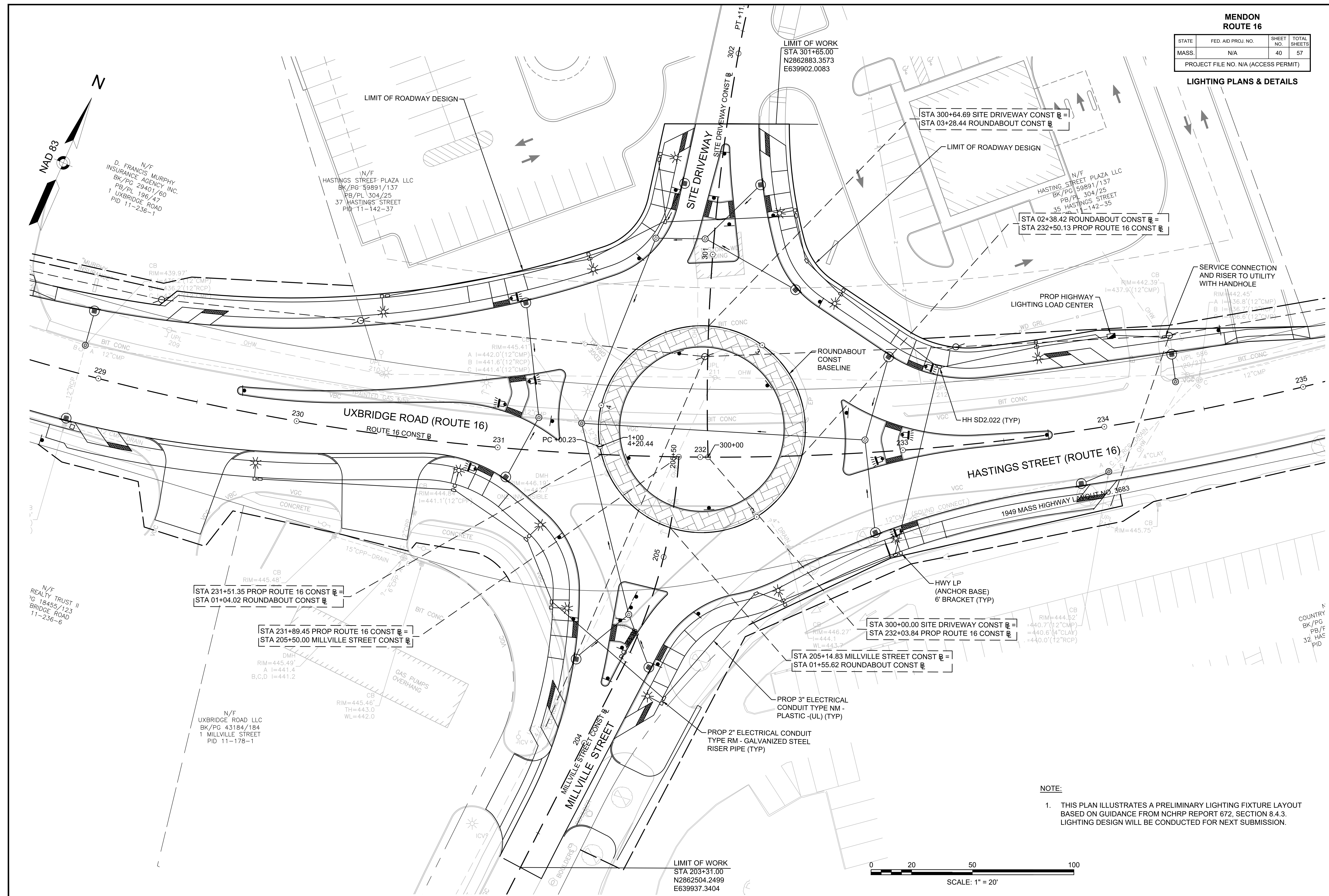
- SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELED WAY SHALL MEET CRITERIA SET FORTH IN NCHRP 350.

**MENDON
ROUTE 16**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	40	57

PROJECT FILE NO. N/A (ACCESS PERMIT)

LIGHTING PLANS & DETAILS



N/F
D. FRANCIS MURPHY
INSURANCE AGENCY INC.
BK/PG 29401/60
PB/PL 196/47
1 UXBRIDGE ROAD
PID 11-236-1

N/F
HASTINGS STREET-PLAZA LLC
BK/PG 59891/137
PB/PL 304/25
37 HASTINGS STREET
PID 11-142-37

N/F
HASTING STREET PLAZA LLC
BK/PG 59891/137
PB/PL 304/25
35 HASTINGS STREET
PID 11-142-35

N/F
REALTY TRUST II
18455/123
BRIDGE ROAD
11-236-6

STA 231+51.35 PROP ROUTE 16 CONST E =
STA 01+04.02 ROUNDABOUT CONST E =

STA 231+89.45 PROP ROUTE 16 CONST E =
STA 205+50.00 MILLVILLE STREET CONST E =

N/F
UXBRIDGE ROAD LLC
BK/PG 43184/184
1 MILLVILLE STREET
PID 11-178-1

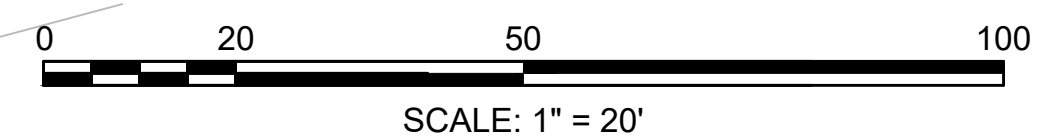
STA 300+00.00 SITE DRIVEWAY CONST E =
STA 232+03.84 PROP ROUTE 16 CONST E =

STA 205+14.83 MILLVILLE STREET CONST E =
STA 01+55.62 ROUNDABOUT CONST E =

LIMIT OF WORK
STA 203+31.00
N2862504.2499
E639937.3404

NOTE:

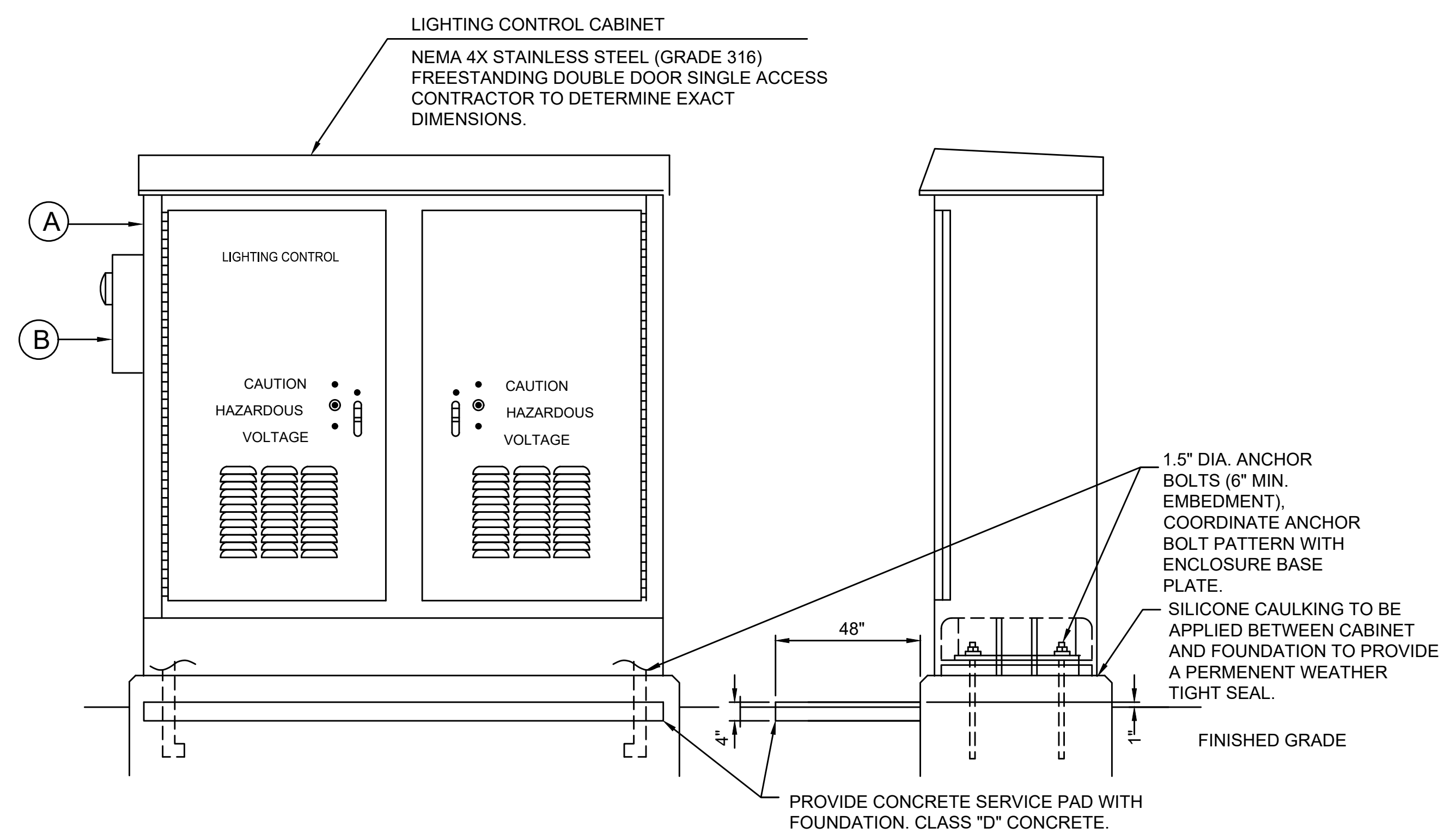
1. THIS PLAN ILLUSTRATES A PRELIMINARY LIGHTING FIXTURE LAYOUT BASED ON GUIDANCE FROM NCHRP REPORT 672, SECTION 8.4.3. LIGHTING DESIGN WILL BE CONDUCTED FOR NEXT SUBMISSION.



STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	41	57

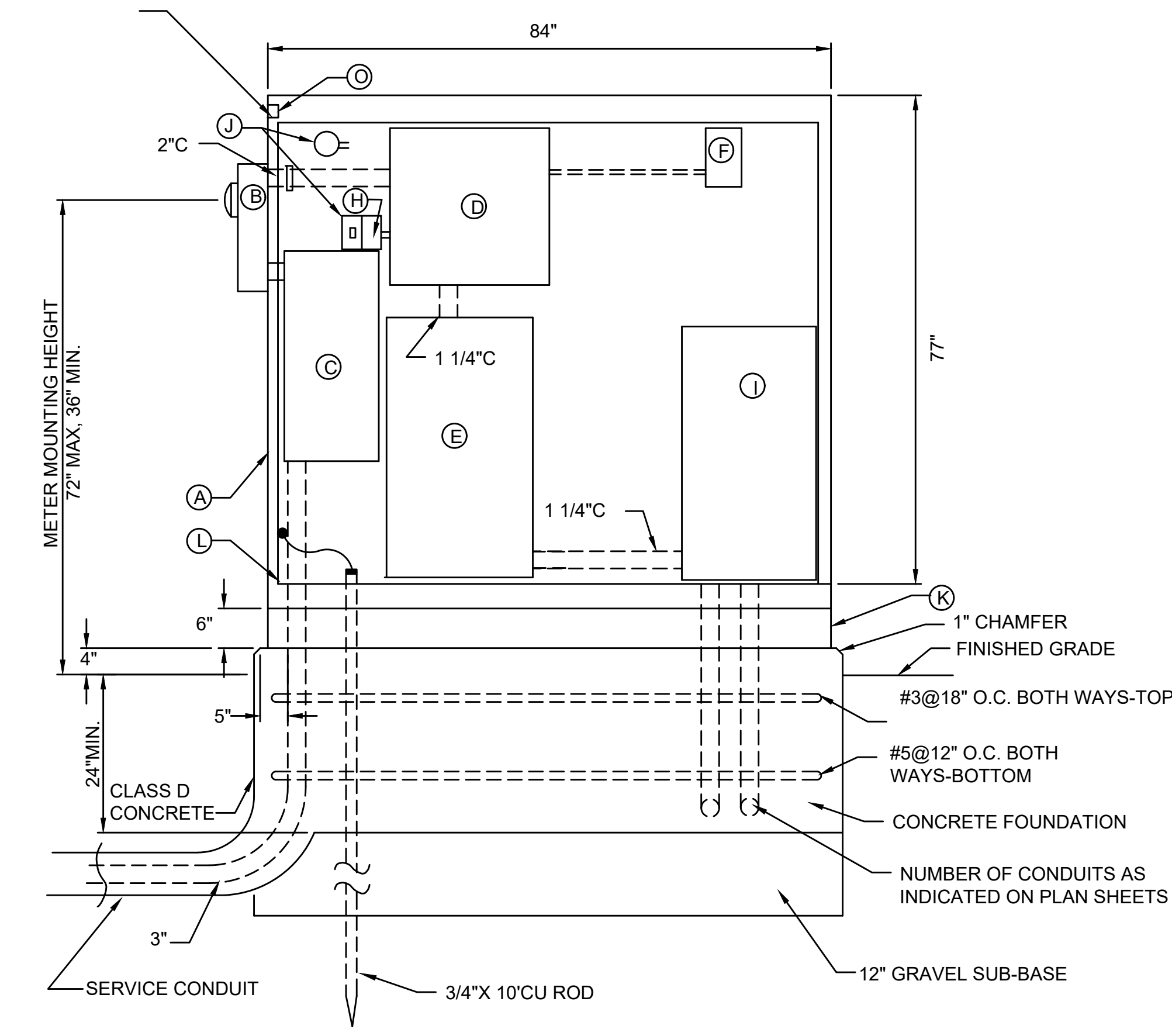
PROJECT FILE NO. N/A (ACCESS PERMIT)

LIGHTING PLANS & DETAILS



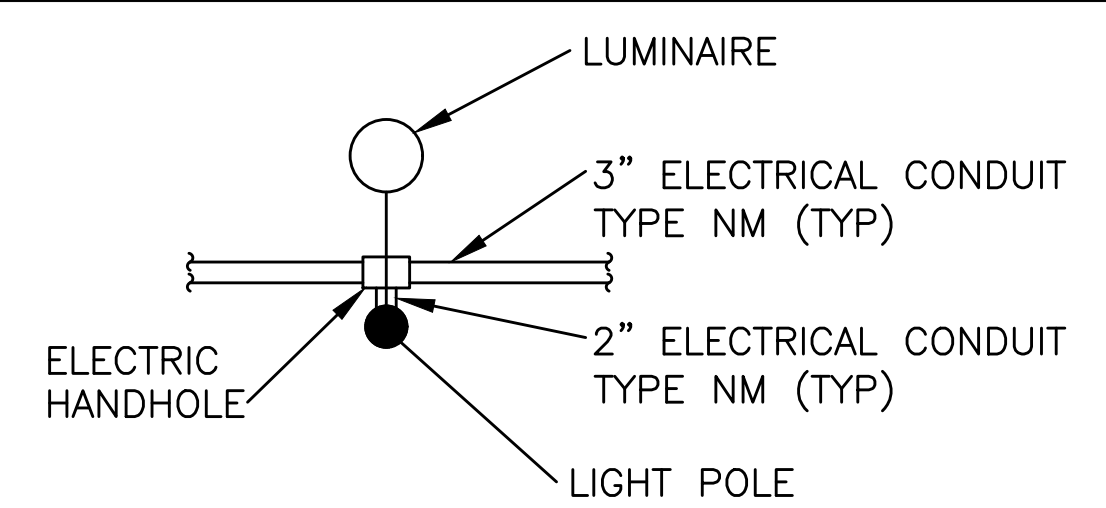
LOAD CENTER ELEVATION
NOT TO SCALE

PROVIDE 1/2" HOLE AND GLASS WINDOW FOR PHOTOCELL EYE. SEAL AROUND WINDOW WATER TIGHT. COORDINATE THE LOCATION ON EACH CABINET TO BE IN THE TOP LEFT OR TOP RIGHT CORNER WITH THE PHOTOCELL EYE AIMED IN THE NORTHWEST DIRECTION.

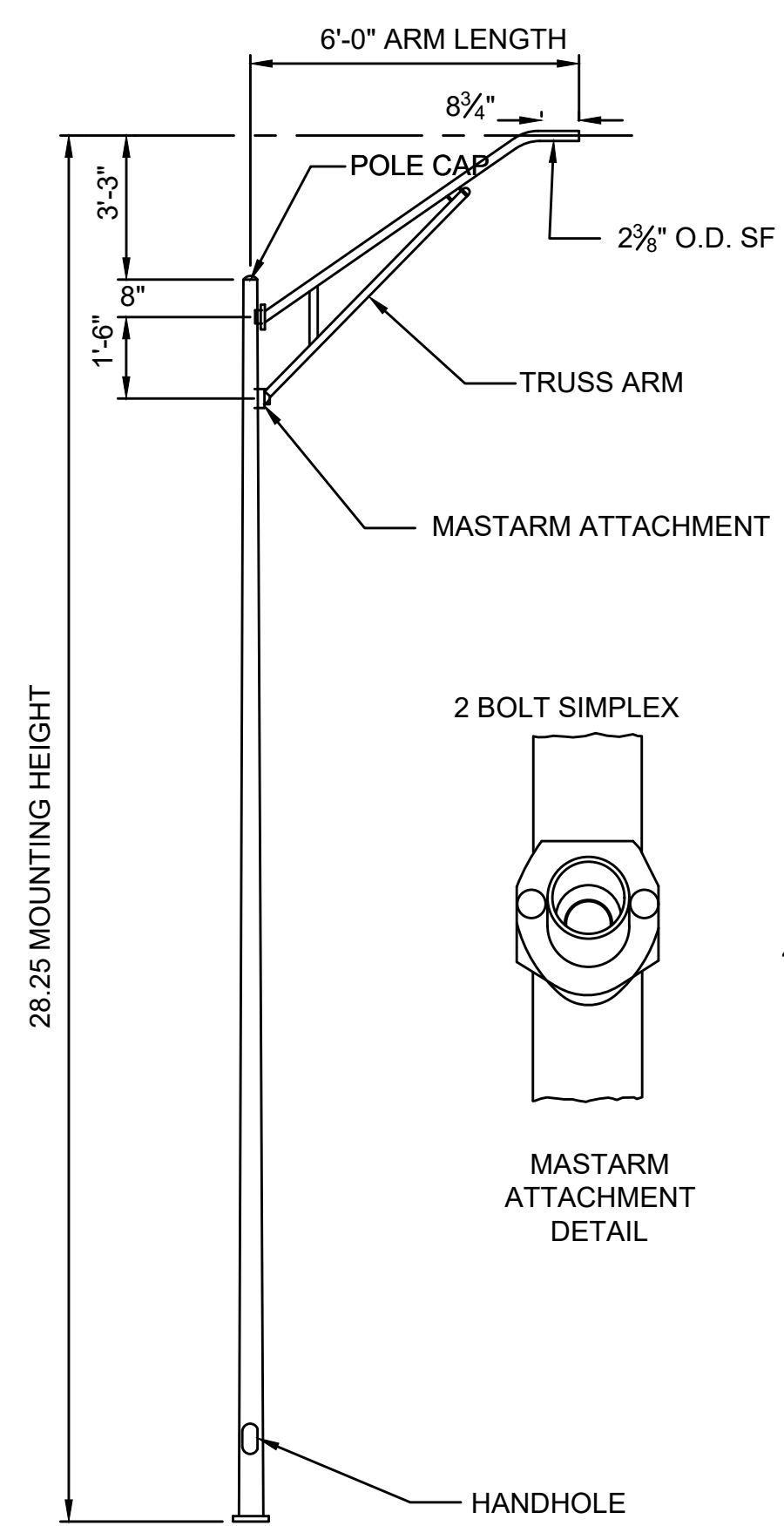


HIGHWAY LIGHTING LOAD CENTER
NOT TO SCALE

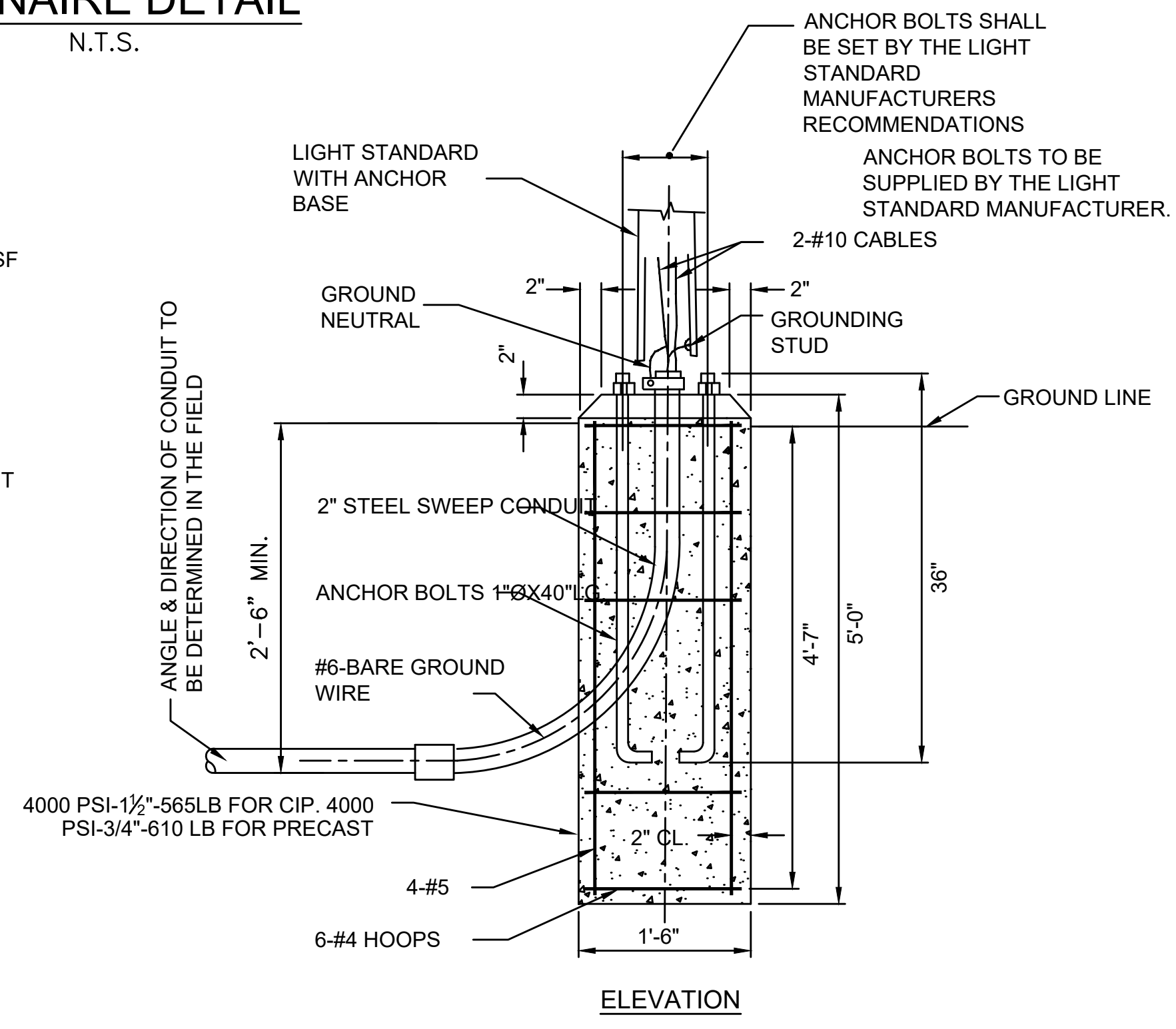
EQUIPMENT LIST	
(A)	NEMA 4X ENCLOSURE (77"H x 84"W x 26"D) STAINLESS STEEL CONSTRUCTION WITH DOUBLE 36"W DOORS
(B)	WATT HOUR METER SOCKET: 100A, WITH BYPASS 120/240V, 1P, 3W
(C)	MAIN SERVICE ENCLOSED CIRCUIT BREAKER: (31.4"H x 14.4"W x 6"D) 200A, 22,000 AIC, 2 POLE
(D)	100 AMP, 120/240V, 1P, 3W PANELBOARD, 16 CIRCUIT WITH (1) 100 AMP, 2 POLE MCB, (1) 40 AMP, 2 POLE BREAKER, (1) 60 AMP, 2 POLE BREAKER, (2) 20 AMP, 1 POLE BREAKERS, (4) 20 AMP, 1 POLE SPARE BREAKERS
(E)	LIGHT CONTACTOR: (39.15"H x 22.15"W x 10.24"D) NEMA TYPE 1 ENCLOSURE 60A, 2P, MECHANICALLY HELD WITH TWO WIRE CONTROL RELAY AND THREE POSITION SELECTOR SWITCH
(F)	TIME CLOCK (9" x 5"W x 4.5"D) 40 AMP, ASTRONOMICAL TIME SWITCH, 120 VOLT, SPST
(H)	GFCI DUPLEX CONVENIENCE RECEPTACLE: (5"H x 5"W x 3"D); 120V, 20 AMP, GFCI (NEMA 5-20R) IN HANDY BOX W/COVER
(I)	LOAD CENTER: 120/240V, 1P, 3W, 100A: (38"H x 20"W x 6"D) SEE PANEL SCHEDULES FOR DETAILS
(J)	SINGLE POLE SINGLE THROW SWITCH AND LIGHT SOCKET WITH 18W CFL
(K)	STEEL BASE
(L)	ENCLOSURE BACKBOARD (69" x 80"W x 3/4")
(O)	PHOTOCELL



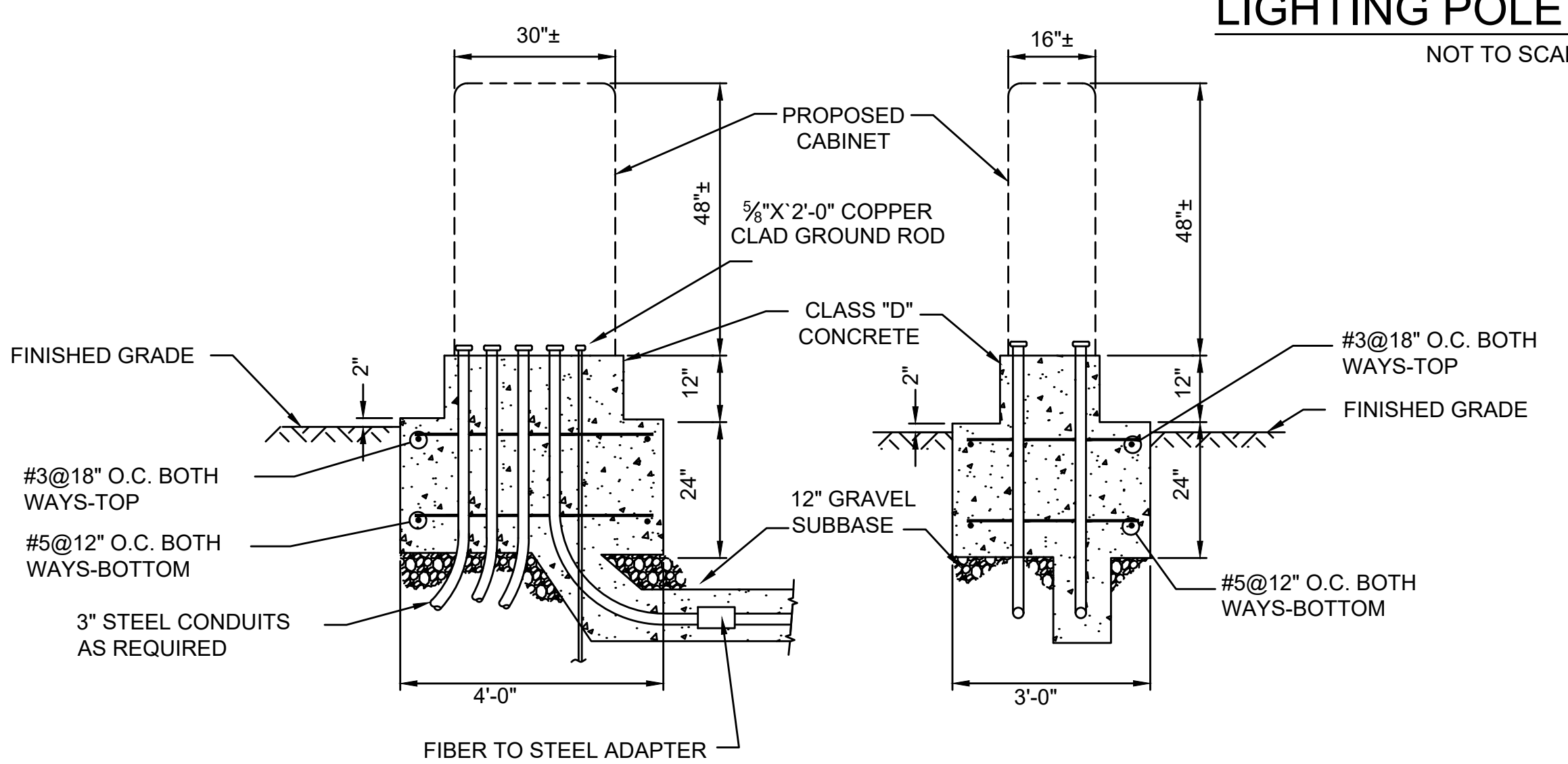
LUMINAIRE DETAIL
N.T.S.



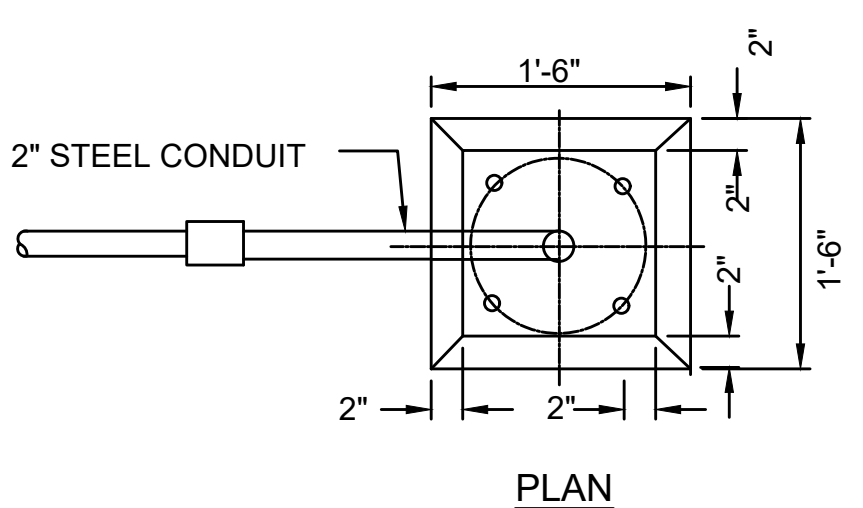
LIGHTING POLE DETAILS
NOT TO SCALE



ANCHOR BASE FOUNDATION
NOT TO SCALE



LIGHTING LOAD CENTER FOUNDATION
NOT TO SCALE



CONDUIT TRENCH DETAIL
NOT TO SCALE

NOTE:
1. ADDITIONAL DETAILS FOR GROUNDING, WIRING, AND CIRCUITING WILL BE ADDED FOR NEXT SUBMISSION.

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	42	57
PROJECT FILE NO. N/A (ACCESS PERMIT)			

TABLES TO BE FILLED IN AT NEXT SUBMISSION

WHEELCHAIR RAMP WITH LANDSCAPING STRIP

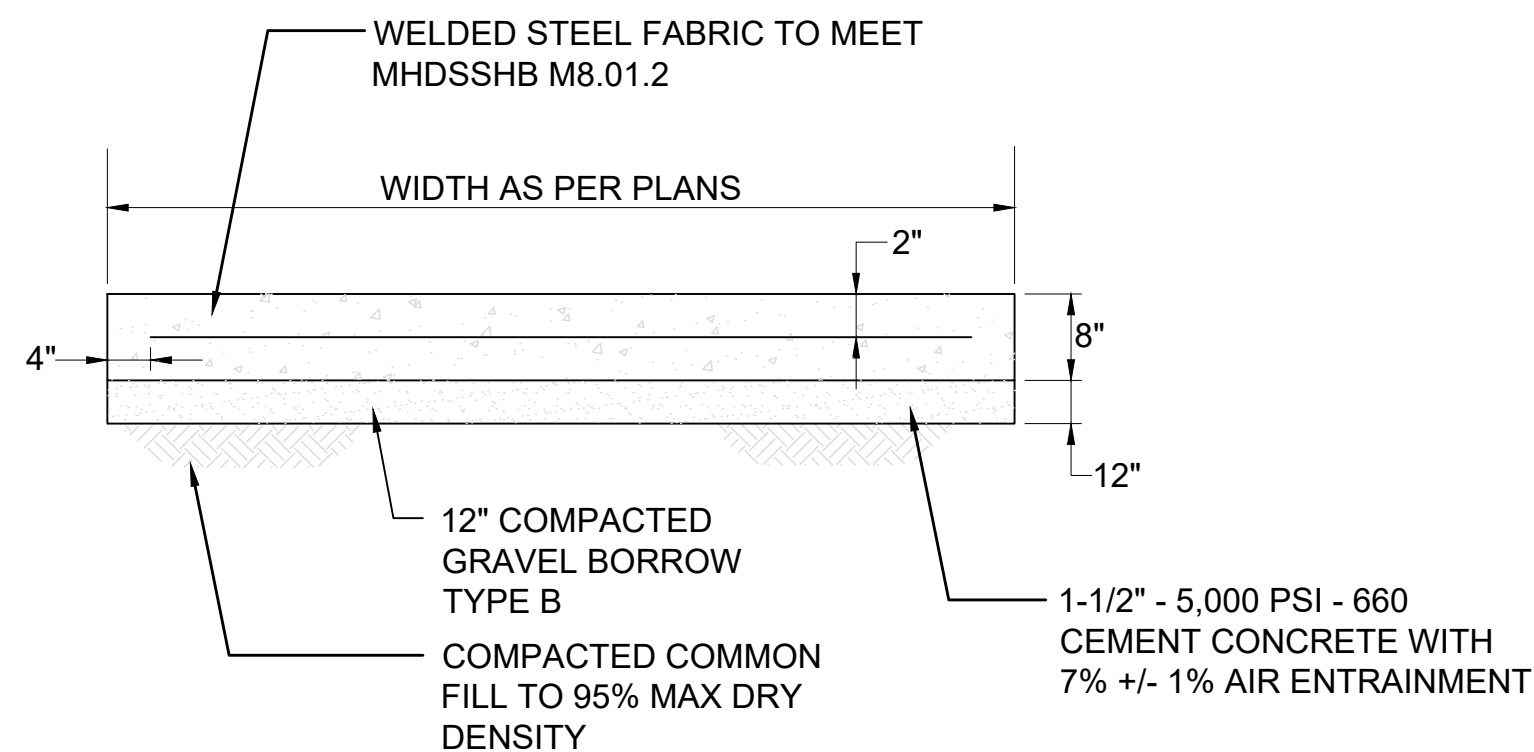
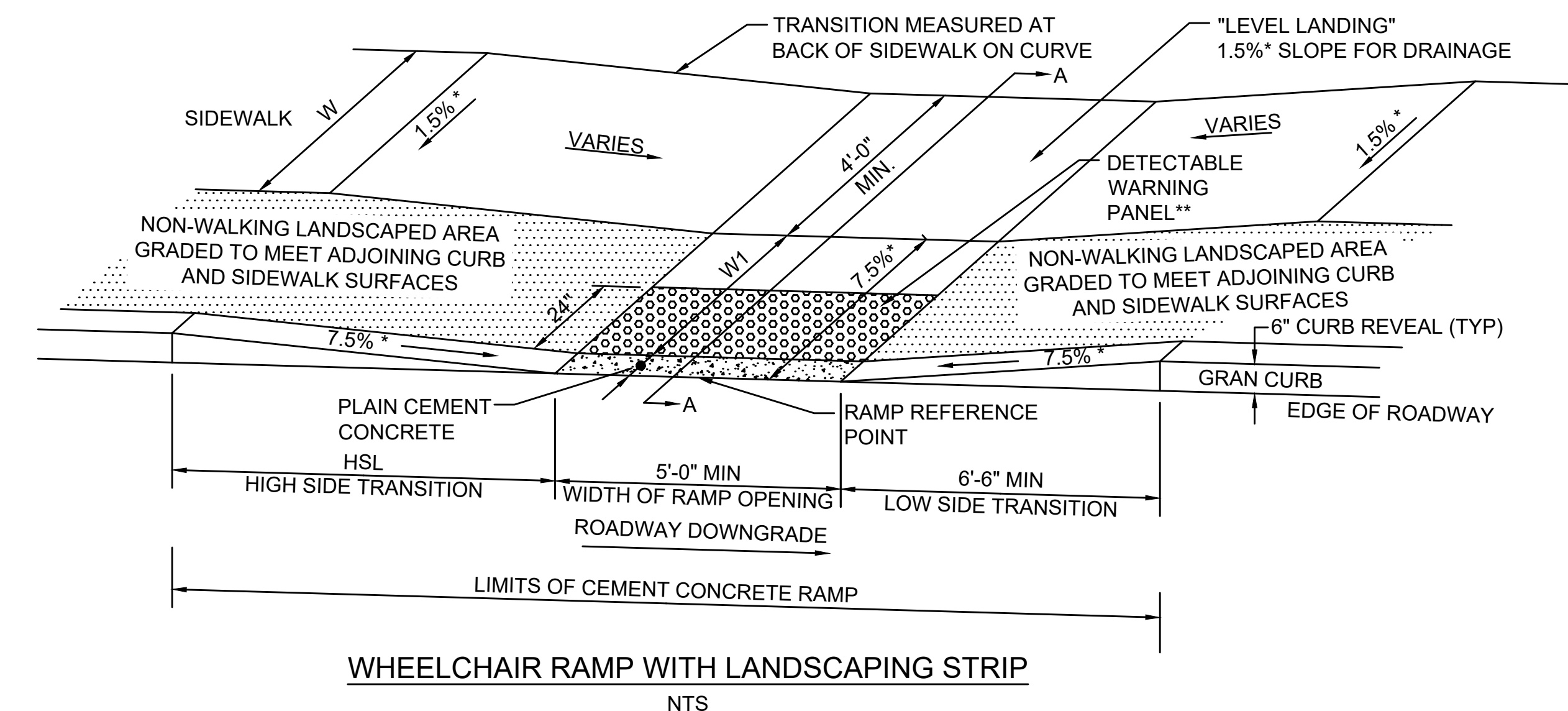
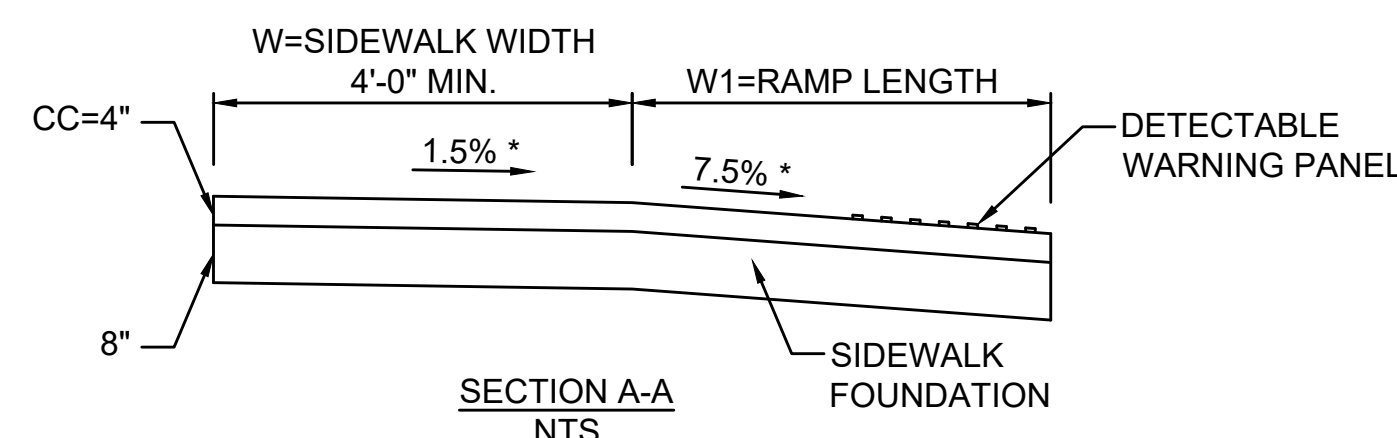
FOR PLAN LOCATIONS OF WHEELCHAIR RAMPS, SEE CURB TIE AND GRADING PLANS

WCR #	BASELINE NAME	RAMP REFERENCE POINT		LENGTH OF PRIMARY RAMP (W1)	WIDTH OF SIDEWALK (W)	WIDTH OF RAMP MIN 5'-0"	DEPTH OF LEVEL LANDING MIN 4'-0"	ROADWAY GUTTER SLOPE (%) (+/- FACING RAMP FROM ROADWAY)	TRANSITION LENGTH***	
		STATION	OFFSET						LEFT SIDE	RIGHT SIDE

LEGEND:

- HSL = HIGH SIDE TRANSITION LENGTH, SEE CONSTRUCTION STANDARD E 107.9.0
- W = SIDEWALK WIDTH
- CC = CEMENT CONCRETE
- * TOLERANCE FOR CONSTRUCTION ±0.5%
- ** PAYMENT INCIDENTAL TO CEM CONC WCR
- *** FACING RAMP FROM ROADWAY

USEABLE SIDEWALK WIDTH PER AAB = W-Wc
USEABLE SIDEWALK WIDTH PER AAB IS NOT TO BE LESS THAN 4'-0"
SEE CONSTRUCTION STANDARD E 107.6.5 FOR DETAILS OF DETECTABLE WARNING PANEL



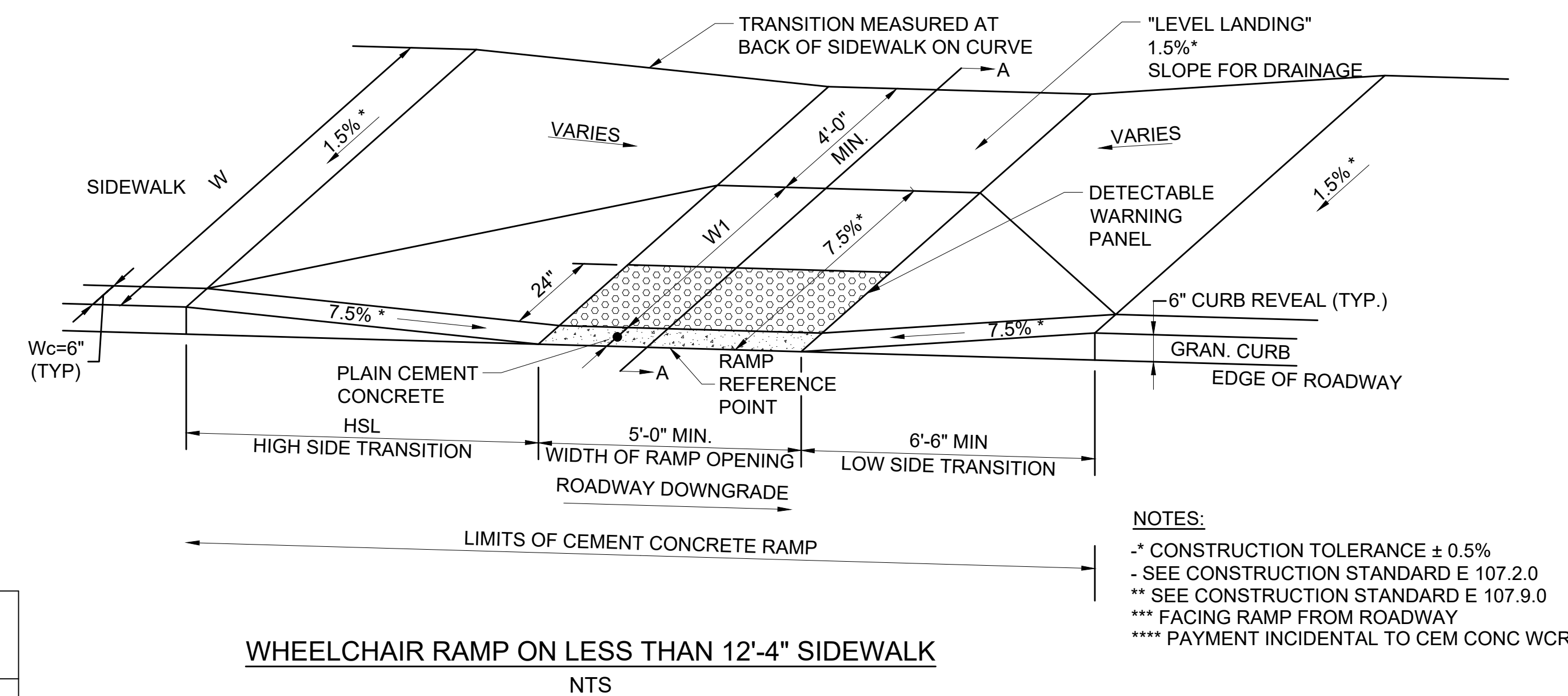
NOTES:

1. CONSTRUCTION TO MEET MHDSSHB SECTION 476
2. CONSTRUCTION JOINTS ARE TO MEET TOWN STANDARDS

REINFORCED CONCRETE DRIVEWAY APRON

WHEELCHAIR RAMPS ON LESS THAN 12'-4" SIDEWALK

WCR #	BASELINE NAME	RAMP REFERENCE POINT		WIDTH OF SIDEWALK (W)	WIDTH OF RAMP MIN 5'-0"	ROADWAY GUTTER SLOPE	TRANSITION LENGTH*	
		STATION	OFFSET				LEFT SIDE	RIGHT SIDE



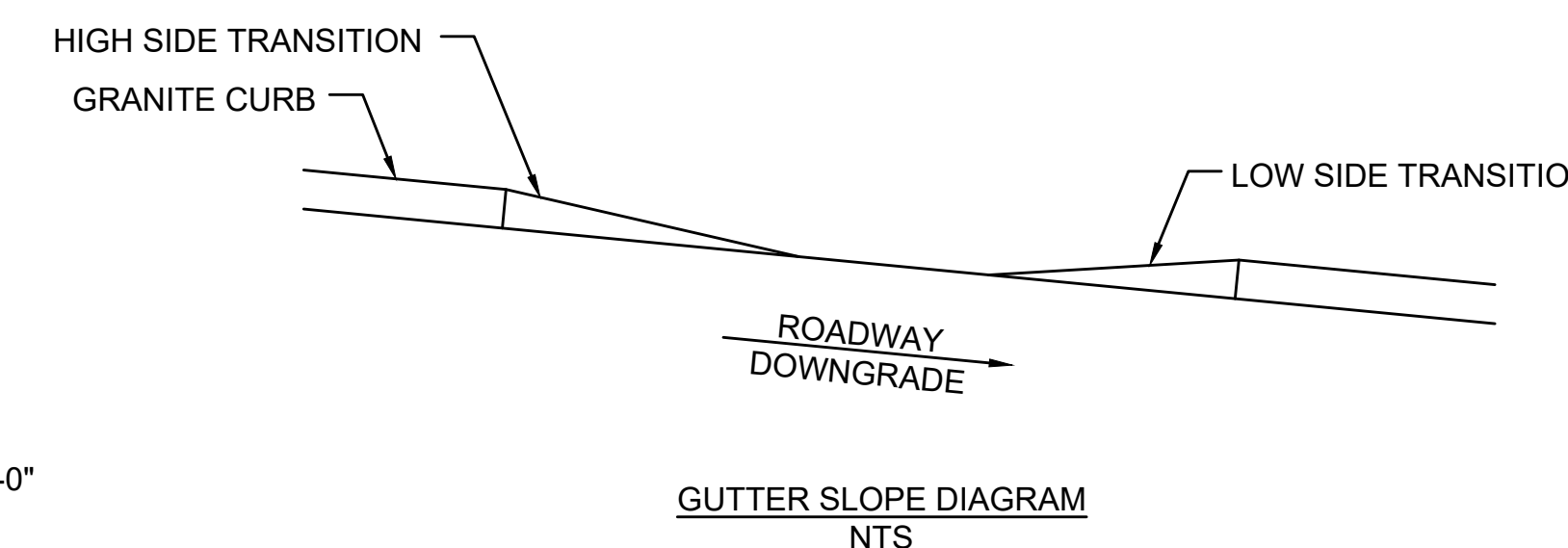
NOTES:

- * CONSTRUCTION TOLERANCE ± 0.5%
- SEE CONSTRUCTION STANDARD E 107.2.0
- ** SEE CONSTRUCTION STANDARD E 107.9.0
- *** FACING RAMP FROM ROADWAY
- **** PAYMENT INCIDENTAL TO CEM CONC WCR

LEGEND:

- HSL = HIGH SIDE TRANSITION LENGTH, SEE CONSTRUCTION STANDARD E 107.9.0
- W = SIDEWALK WIDTH
- CC = CEMENT CONCRETE
- * TOLERANCE FOR CONSTRUCTION ±0.5%
- ** PAYMENT INCIDENTAL TO CEMENT CONCRETE WCR

USEABLE SIDEWALK WIDTH PER AAB = W-Wc
USEABLE SIDEWALK WIDTH PER AAB IS NOT TO BE LESS THAN 4'-0"
SEE CONSTRUCTION STANDARD E 107.6.5 FOR DETAILS OF DETECTABLE WARNING PANEL



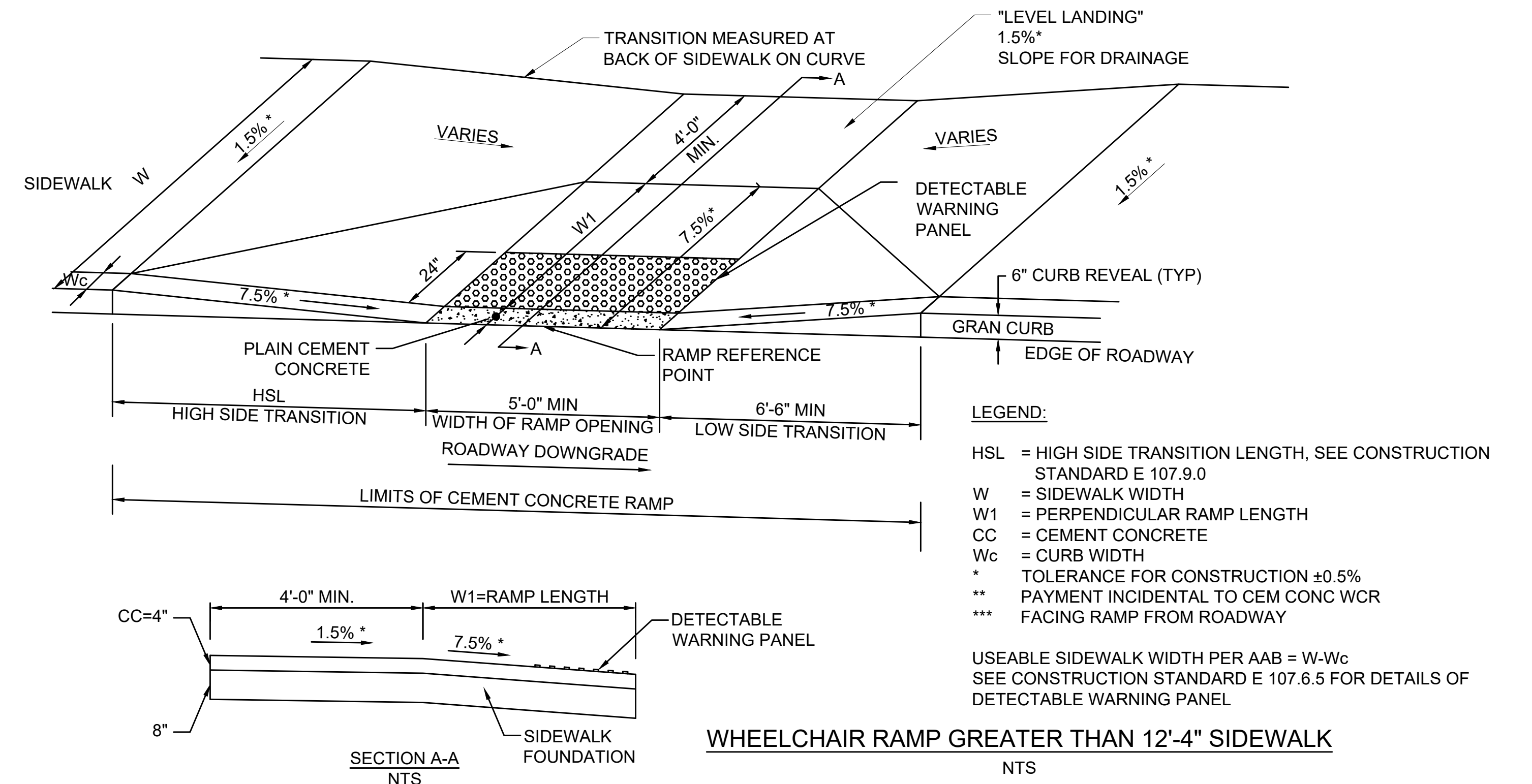
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	43	57
PROJECT FILE NO. N/A (ACCESS PERMIT)			

WHEELCHAIR RAMP AND DRIVEWAY DETAILS
SHEET 2 OF 2

WHEELCHAIR RAMPS GREATER THAN 12'-4" SIDEWALK

WCR #	BASELINE NAME	RAMP REFERENCE POINT		WIDTH OF SIDEWALK (W)	WIDTH OF RAMP MIN 5'-0"	ROADWAY GUTTER SLOPE	TRANSITION LENGTH*	
		STATION	OFFSET				LEFT SIDE	RIGHT SIDE

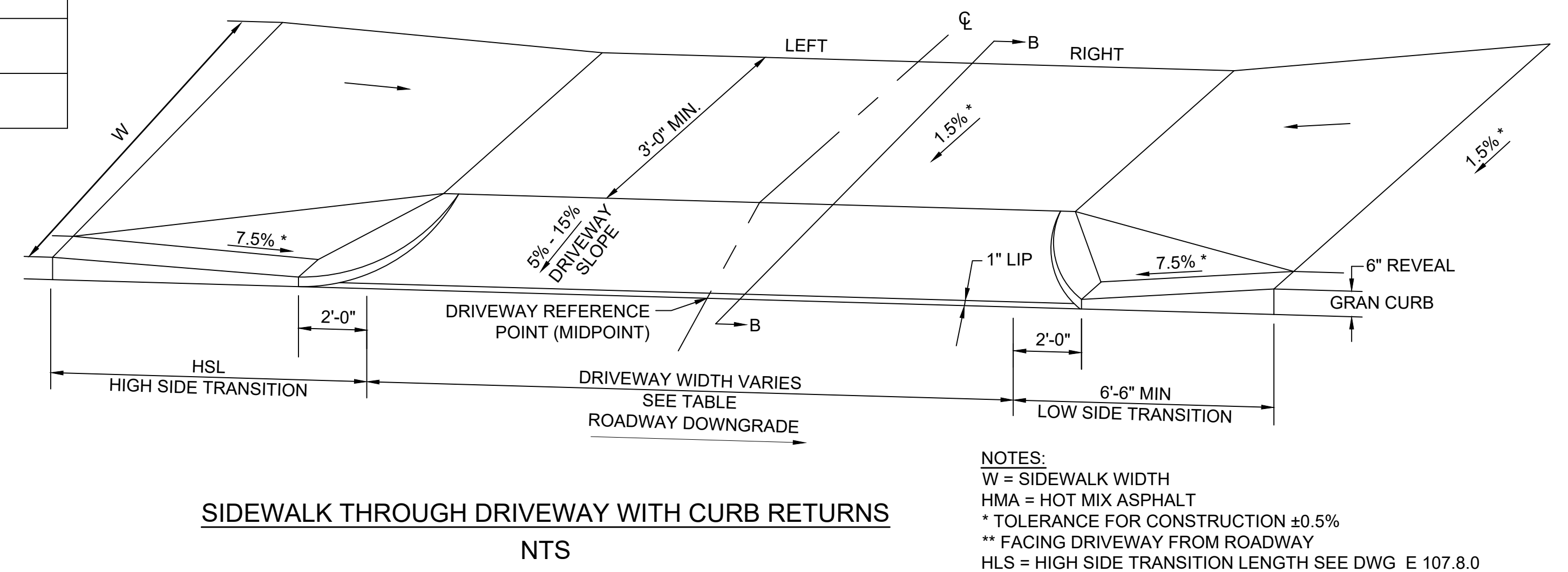
* SEE CONSTRUCTION STANDARD E 107.6.3 FOR TREATMENT OF 3" REVEAL



SIDEWALK THROUGH DRIVEWAYS WITH CURB RETURNS

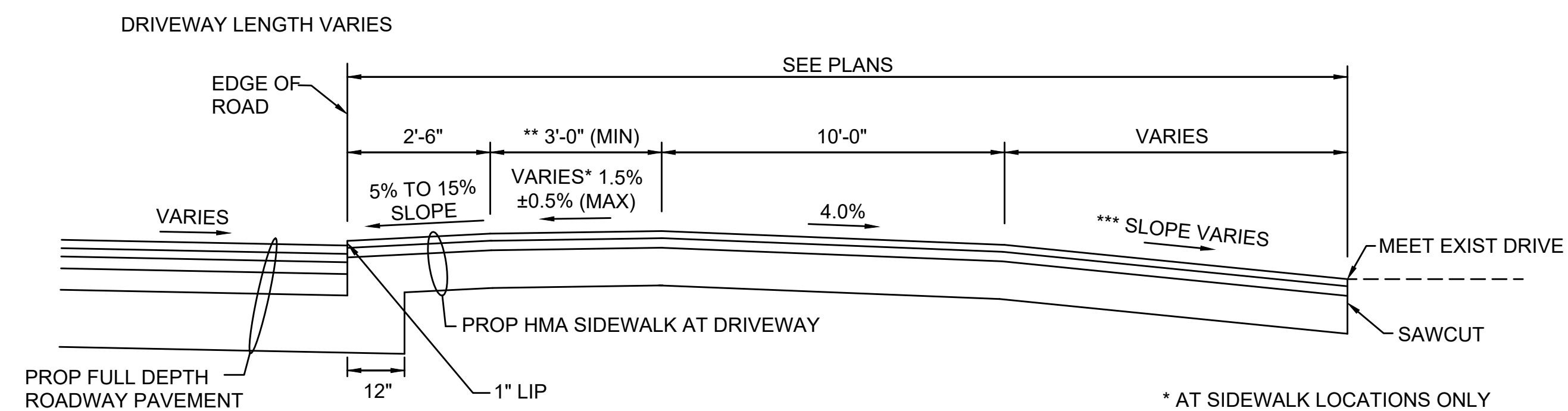
DRIVEWAY #	BASELINE NAME	DRIVEWAY REFERENCE POINT		WIDTH OF DRIVEWAY	WIDTH OF SIDEWALK AT DRIVEWAY	PATH OF TRAVEL MIN 3'-0"	ROADWAY GUTTER SLOPE	TRANSITION LENGTH*		DRIVEWAY SLOPE
		STATION	OFFSET					LEFT SIDE	RIGHT SIDE	
x	xxxxx	x+xx.xx	xx.xx' xx	x.xx'	x.xx'	x.xx'	x.xx%	x.xx'	x.xx'	x.xx%

* FACING RAMP FROM ROADWAY, MEASURED AT BACK OF SIDEWALK FOR RAMPS ON A RADIUS



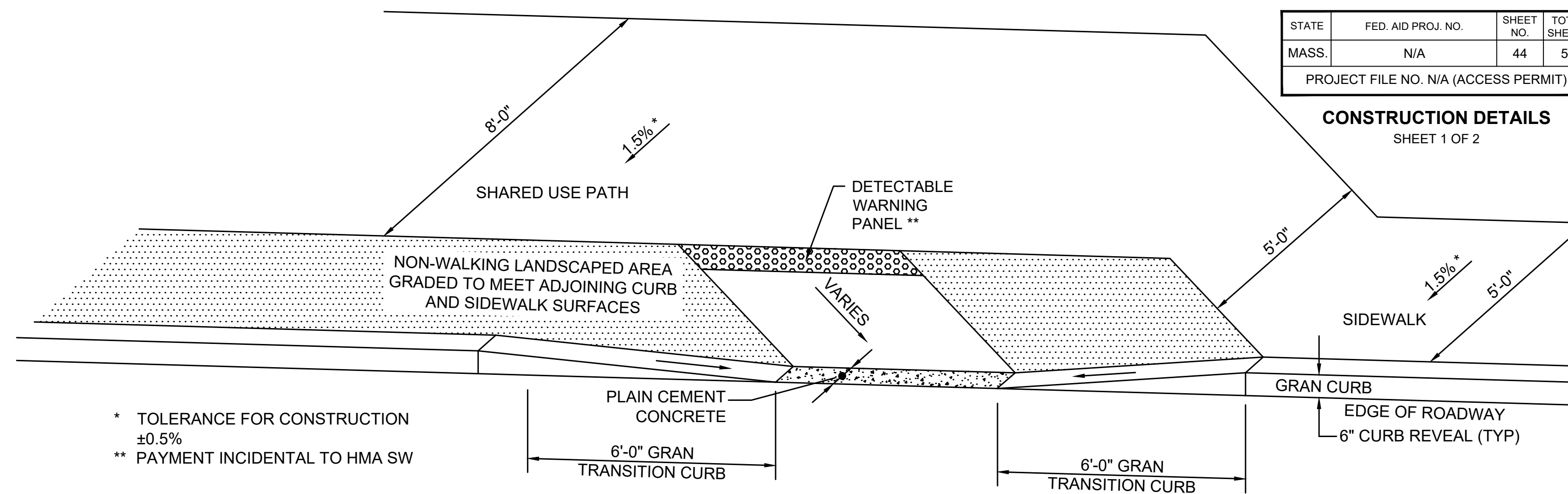
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	44	57
PROJECT FILE NO. N/A (ACCESS PERMIT)			

CONSTRUCTION DETAILS
SHEET 1 OF 2

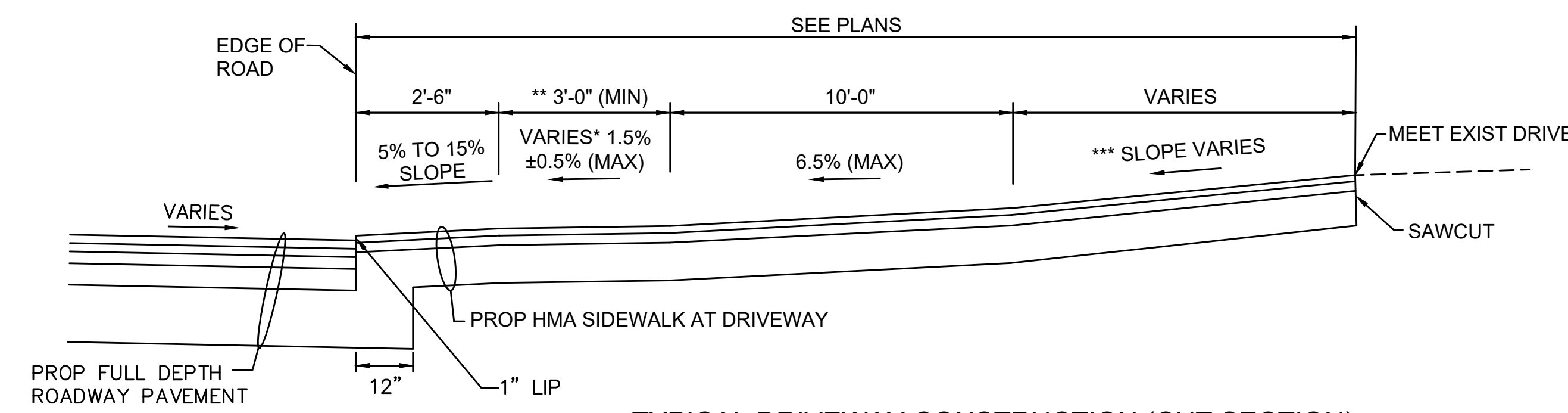


TYPICAL DRIVEWAY CONSTRUCTION (FILL SECTION)
NTS

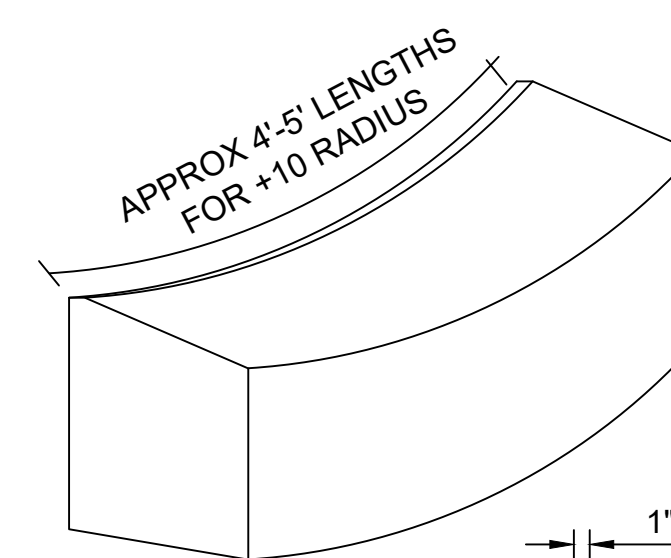
* AT SIDEWALK LOCATIONS ONLY
** 5'-6" AT PROP 8'-0" SIDEWALK LOCATION
*** COMMERCIAL DRIVE ±8% (MAX)
RESIDENTIAL DRIVE ±15% (MAX)



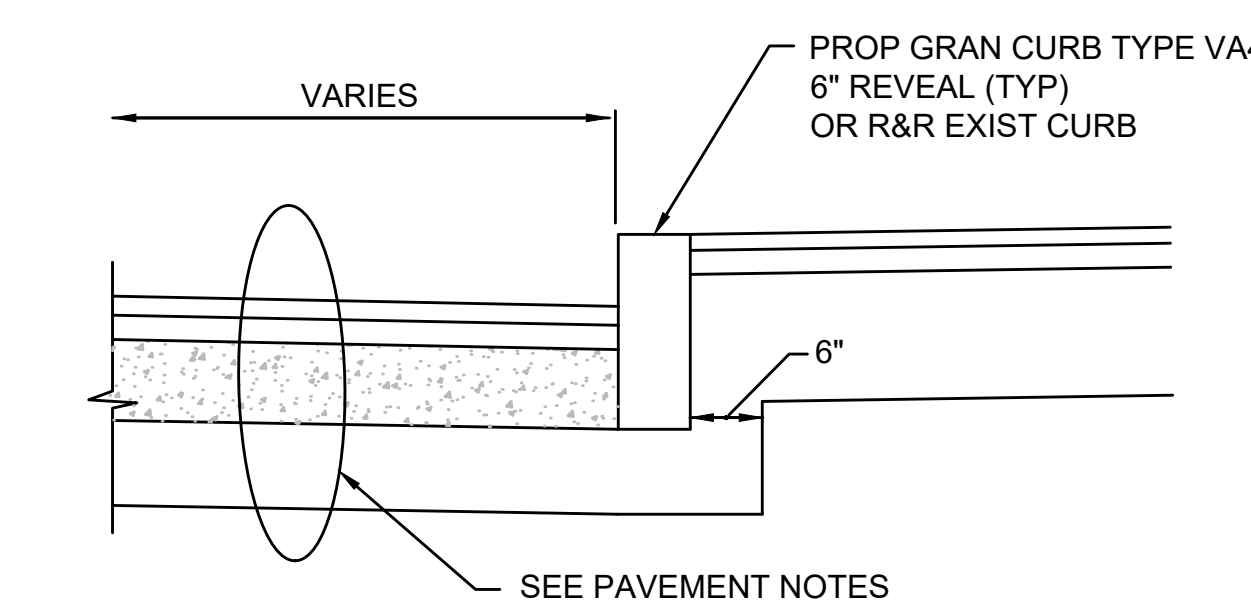
HMA BIKE RAMP DETAIL
NTS



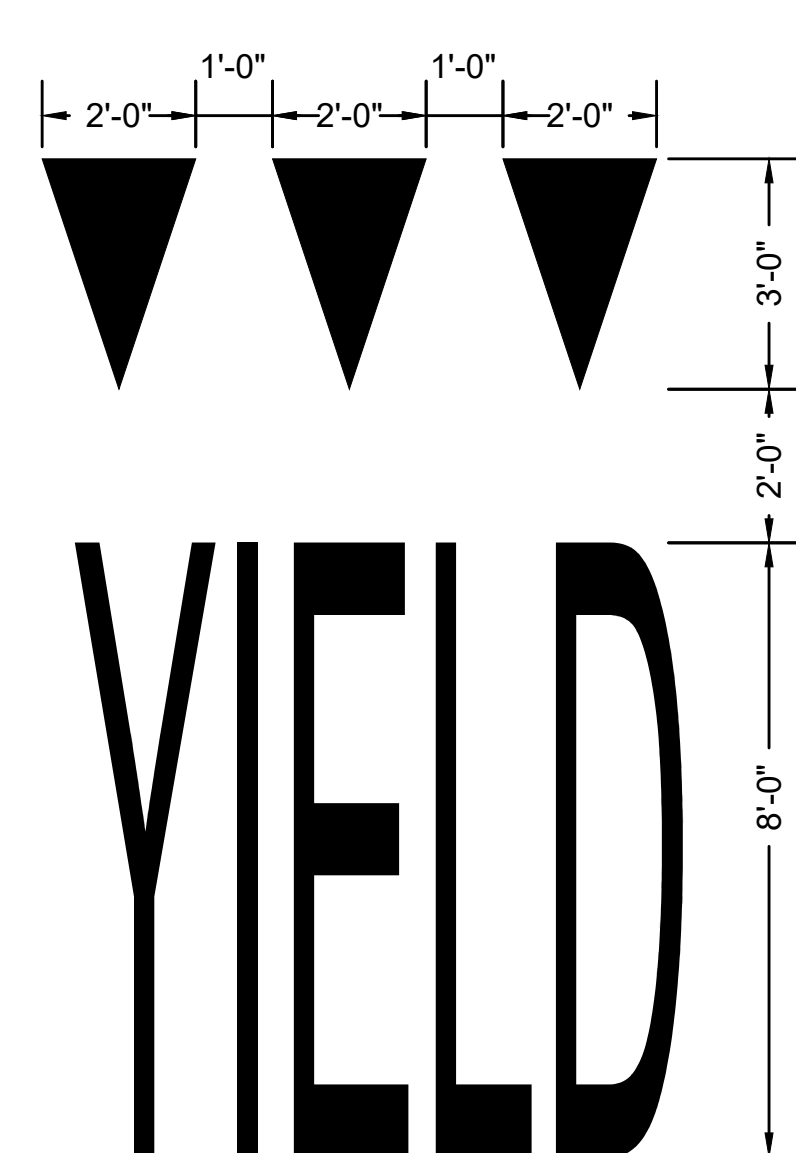
TYPICAL DRIVEWAY CONSTRUCTION (CUT SECTION)
NTS



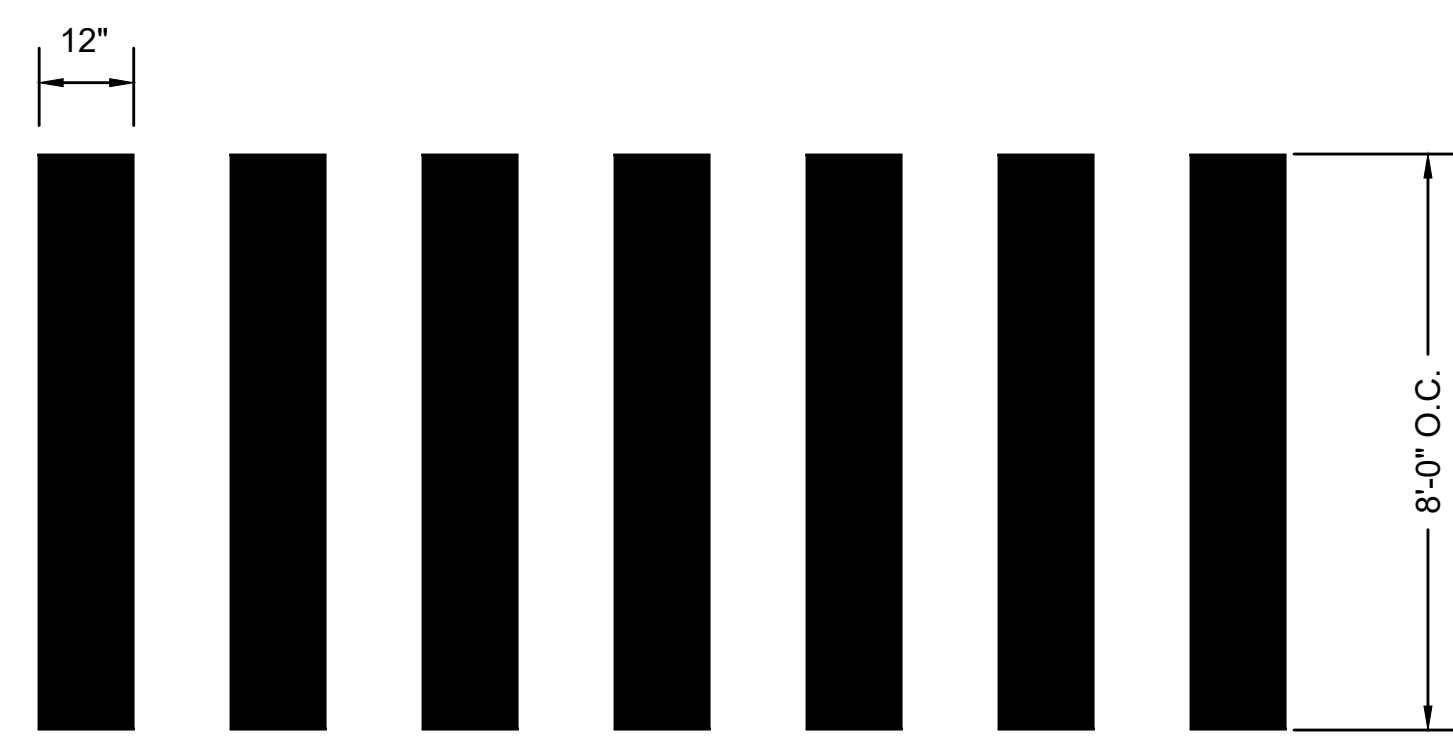
TYPE T-100 TRAVERSABLE GRANITE CURBING
NTS



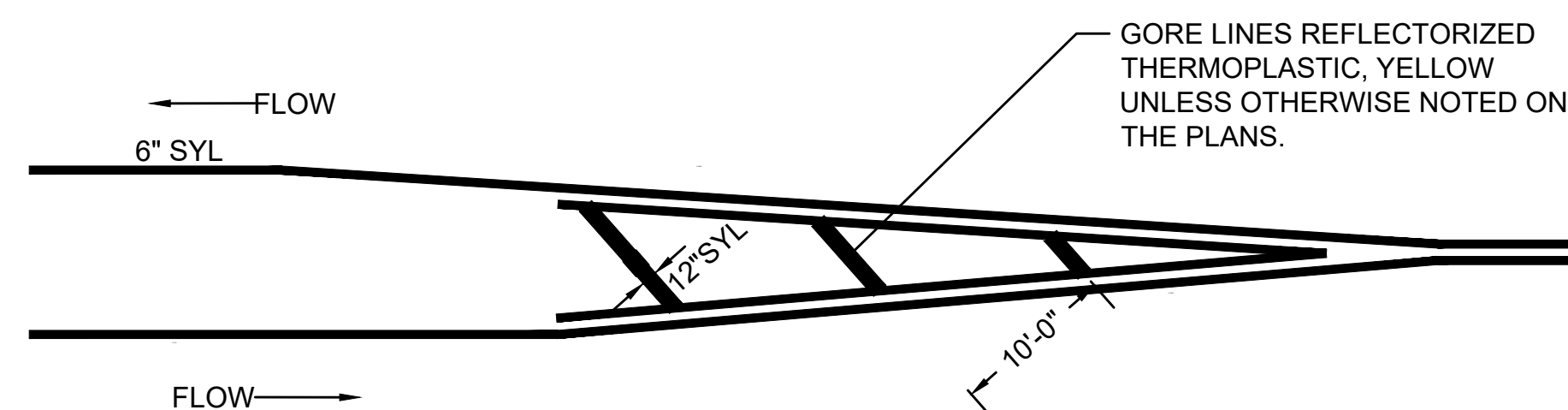
GRANITE CURB SET IN FULL DEPTH PAVEMENT LESS THAN 4 FEET WIDE
NTS



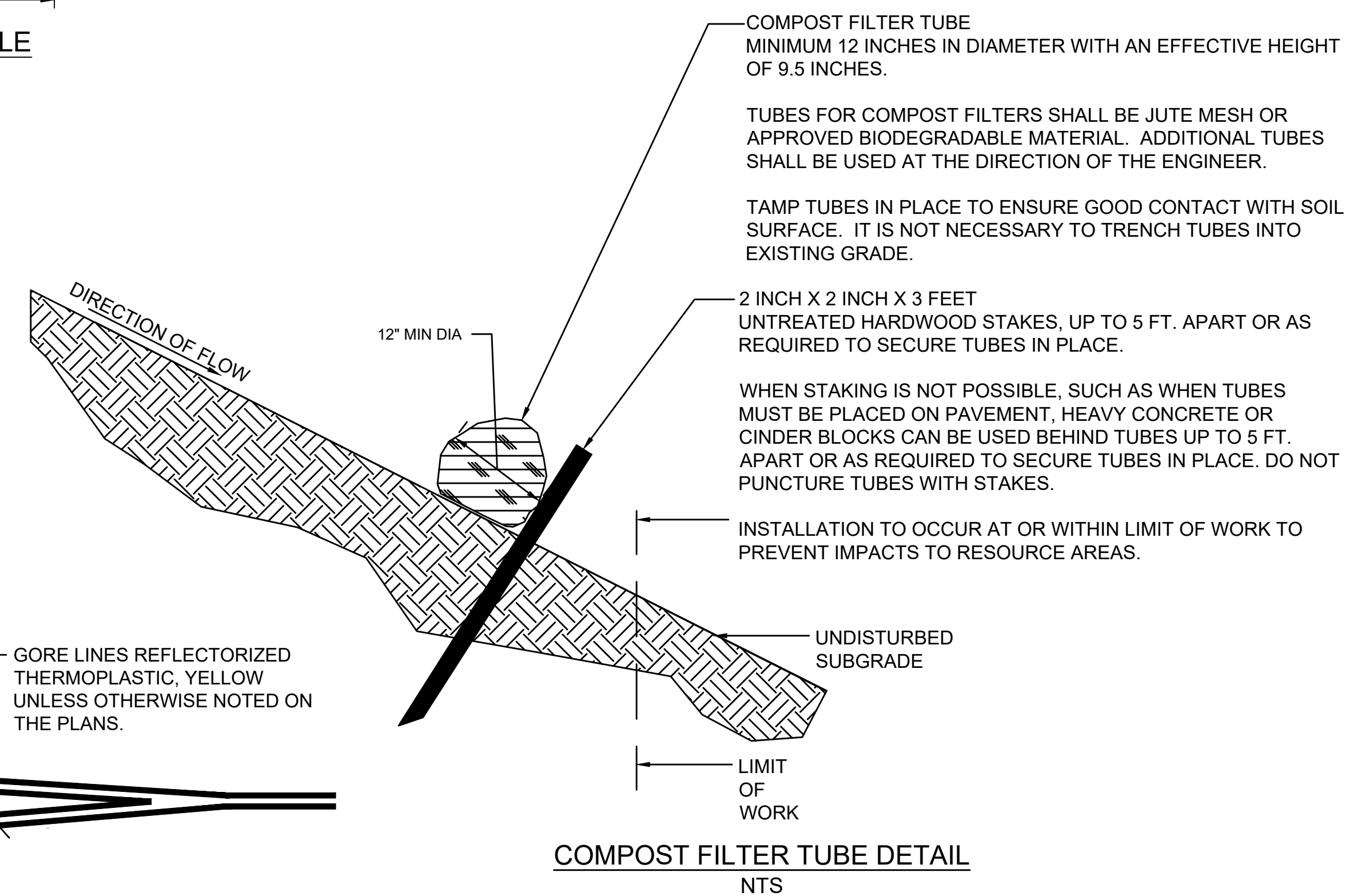
YIELD MARKINGS
NTS



CROSSWALK MARKINGS (CW)
NTS



STANDARD CROSS HATCHING
NTS

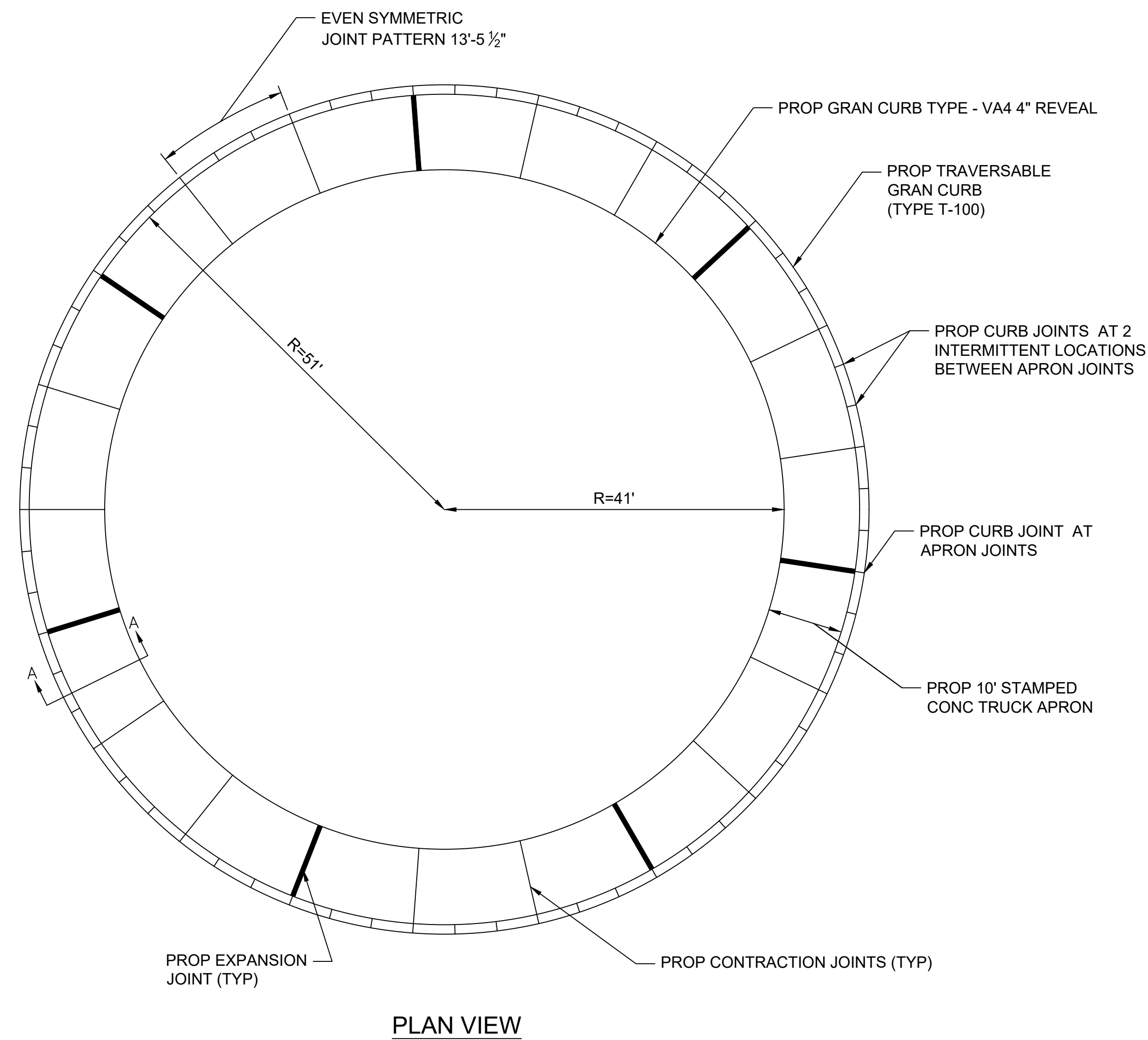


COMPOST FILTER TUBE DETAIL
NTS

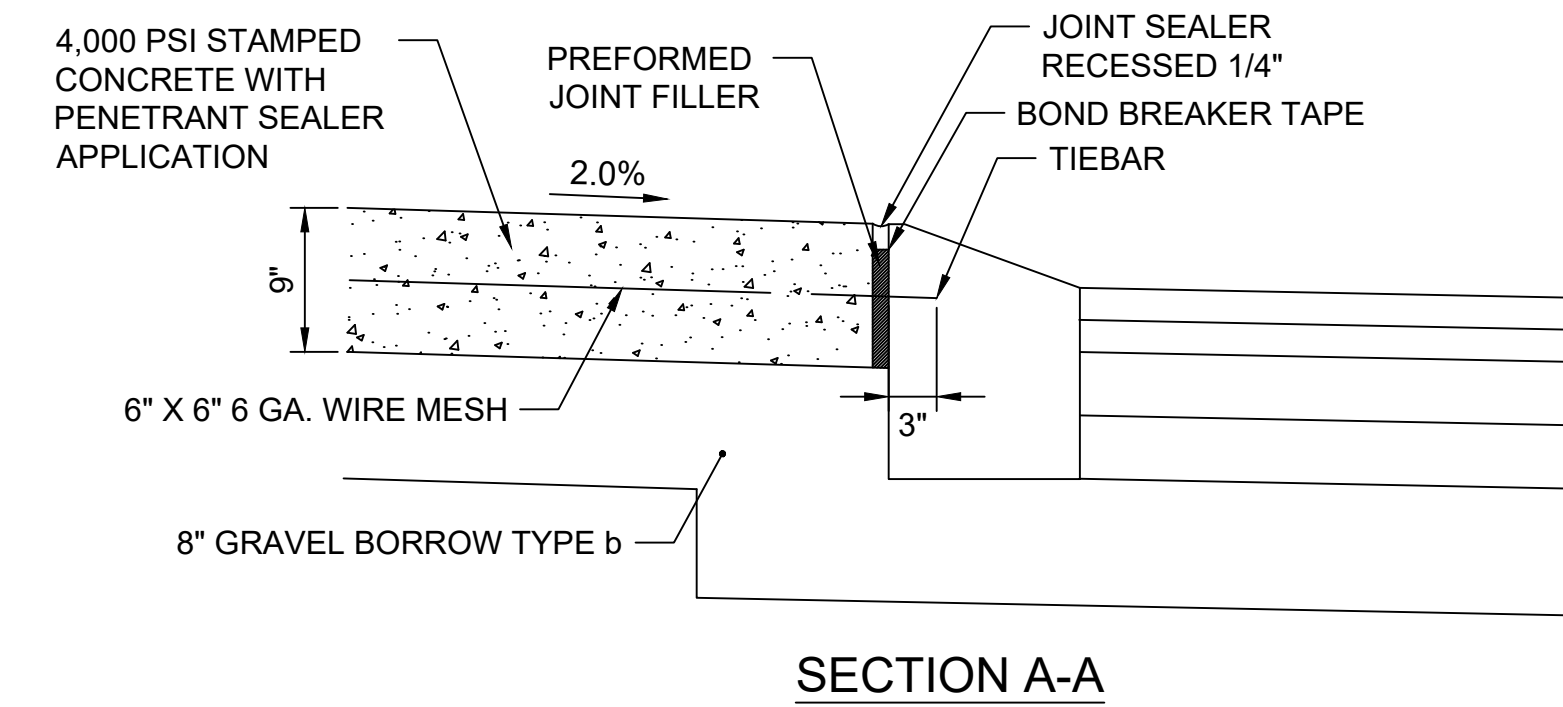
**MENDON
ROUTE 16**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	45	57
PROJECT FILE NO. N/A (ACCESS PERMIT)			

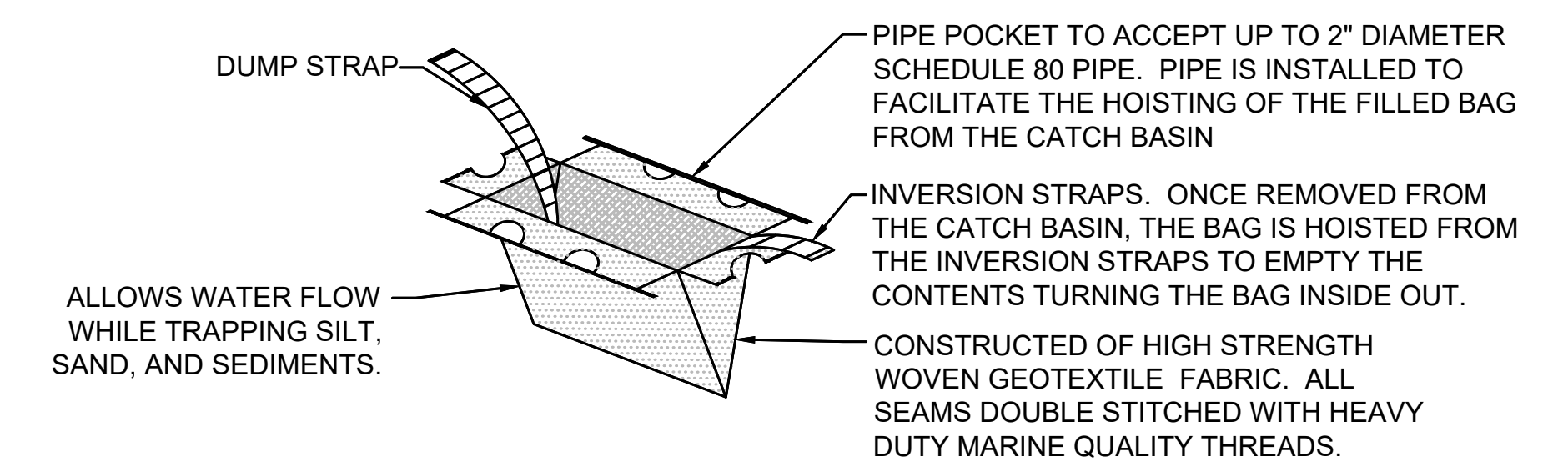
CONSTRUCTION DETAILS
SHEET 2 OF 2



PLAN VIEW



SECTION A-A

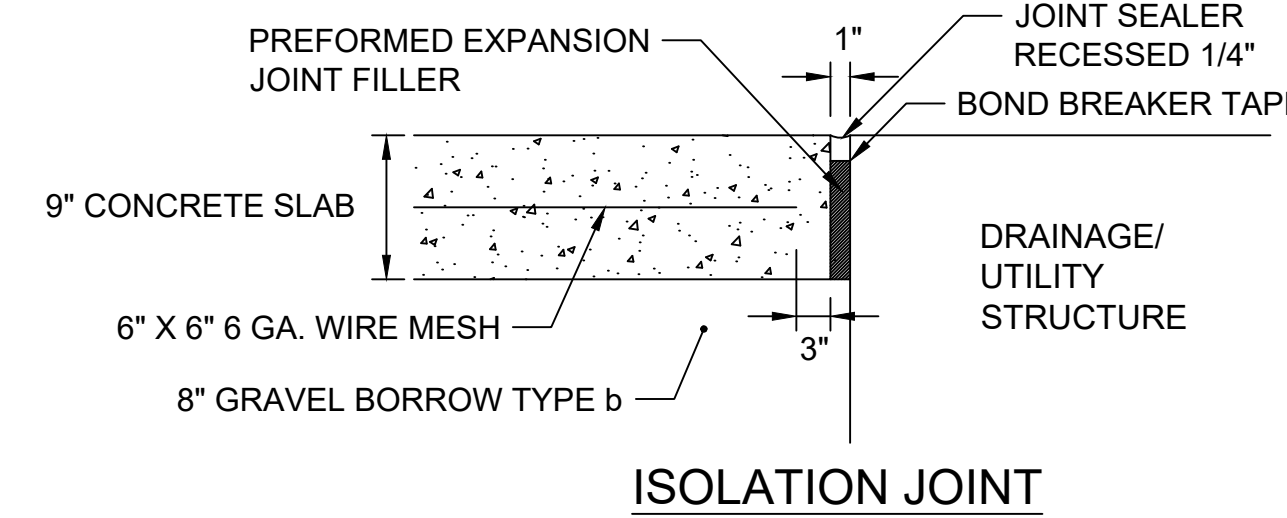


PRACTICE STORM DRAIN INLET PROTECTION: INLET PROTECTION MEASURES REMOVE SEDIMENT FROM THE DISCHARGE PRIOR TO ENTRY INTO THE STORM DRAIN INLETS.

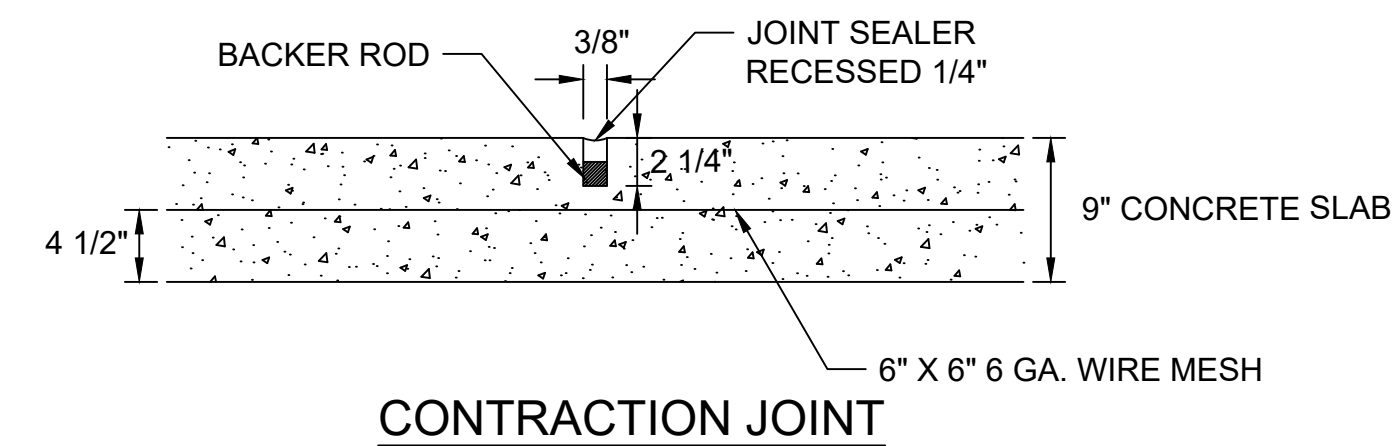
INSTALLATION REQUIREMENTS: THE CONTRACTOR MUST NOT ALLOW ACCUMULATED SEDIMENT TO BLOCK STORM DRAIN INLETS, THIS MAY CAUSE STORMWATER RUNOFF TO BYPASS THE STORMWATER CONVEYANCE SYSTEM AND CREATE PROBLEMS DOWN-SLOPE INCLUDING ADDITIONAL EROSION OR FLOODING.

MAINTENANCE REQUIREMENTS: THE CONTRACTOR MUST INSPECT INLET PROTECTION PRACTICES AS REQUIRED BY THE PROJECT'S SWPPP AND REPAIR THEM AS NECESSARY INCLUDING REMOVING ACCUMULATED SEDIMENT, CLEAN, OR REMOVE AND REPLACE. THE PROTECTION MEASURES AS SEDIMENT ACCUMULATES, THE FILTER BECOMES CLOGGED, AND/OR PERFORMANCE IS COMPROMISED. THE PROTECTION MEASURES MUST BE SERVICED, CLEANED, OR REMOVED AND REPLACED WHEN SEDIMENT HAS FILLED TO 1/2 OF THE CAPACITY OF AVAILABLE STORAGE.

SILT SACK
NTS



ISOLATION JOINT

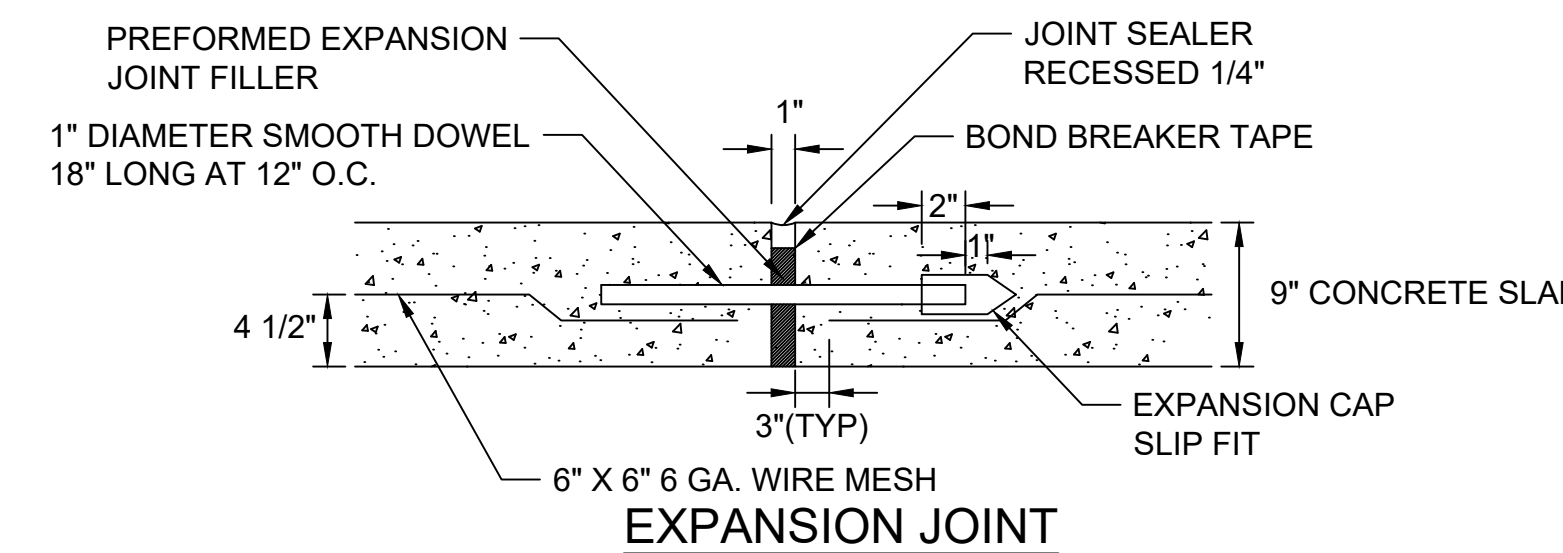


CONTRACTION JOINT

DOWEL NOTES:

1. DOWELS SHALL BE PLAIN STEEL BARS CONFORMING TO ASTM A 615, GRADE 50.
2. DOWELS SHALL BE PLACED 12" FROM THE CENTRAL ISLANDS PROP GRAN CURB AND THEN SPACED AT 12" O.C.
3. DOWELS SHALL BE WIPED CLEAN AND COATED WITH A THIN FILM OF LUBRICATING OIL OR GREASE BEFORE CONCRETE IS PLACED.

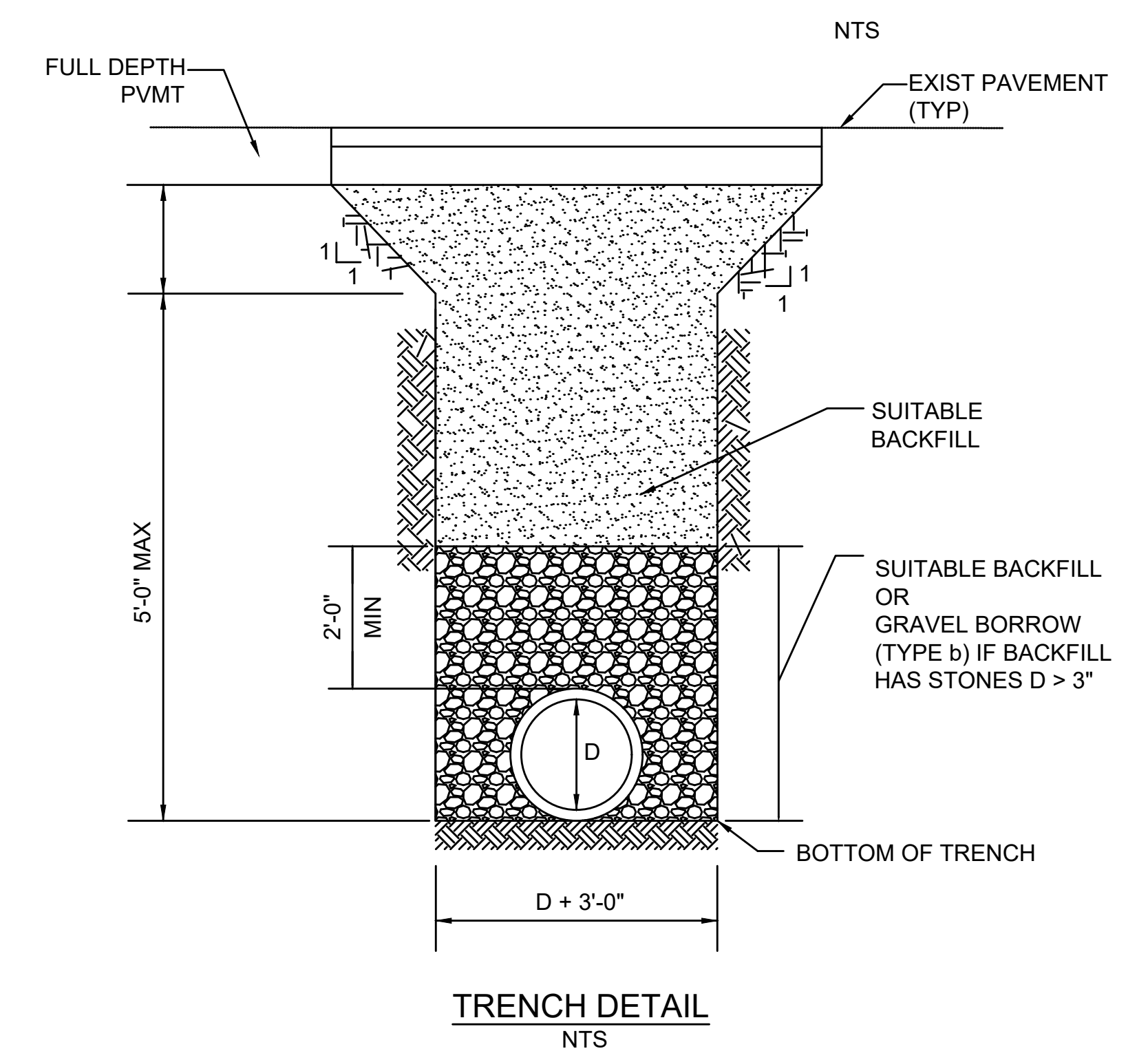
TRUCK APRON
NTS



EXPANSION JOINT

JOINT NOTES:

1. NO ADDITIONAL CONSTRUCTION JOINTS SHALL BE PERMITTED. ALL CONSTRUCTION JOINTS SHALL BE LOCATED AT EXPANSION JOINTS.
2. BOND BREAKER TAPE SHALL BE USED BETWEEN PREFORMED JOINT FILLER AND JOINT SEALER.
3. JOINT SEALER SHALL BE SILICONE OR POLYURETHANE COLORED TO CLOSELY MATCH THE STAMPED CONCRETE.
4. BACKER ROD SHALL BE A CLOSED CELL POLYURETHANE FOAM ROD WITH DIAMETER 25% LARGER THAN SAWCUT WIDTH.

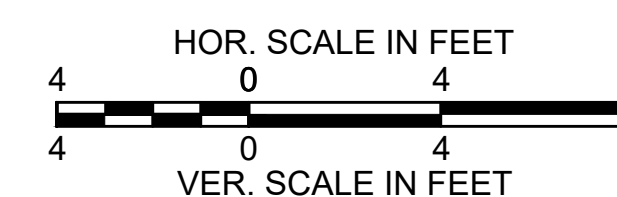
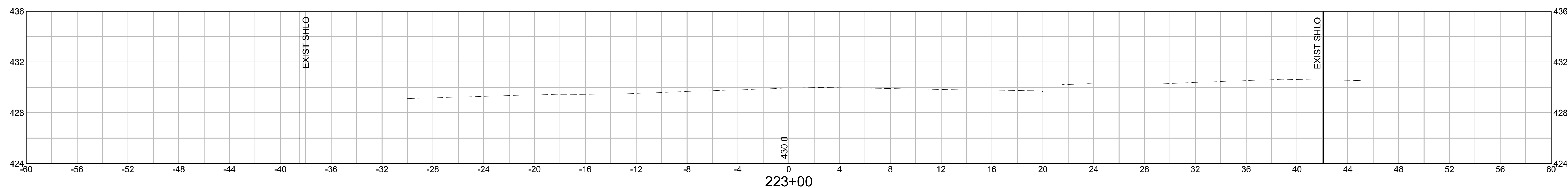
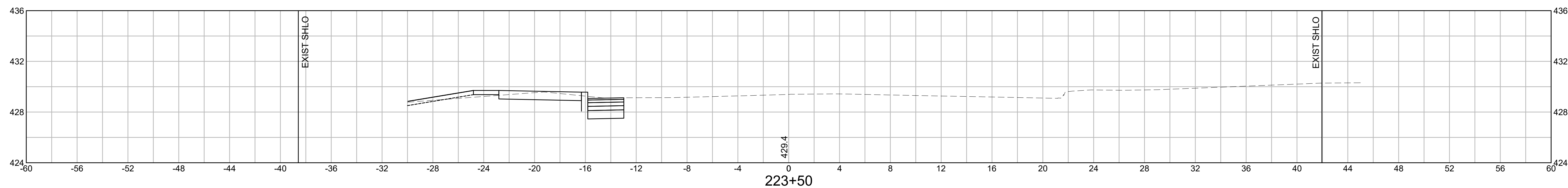
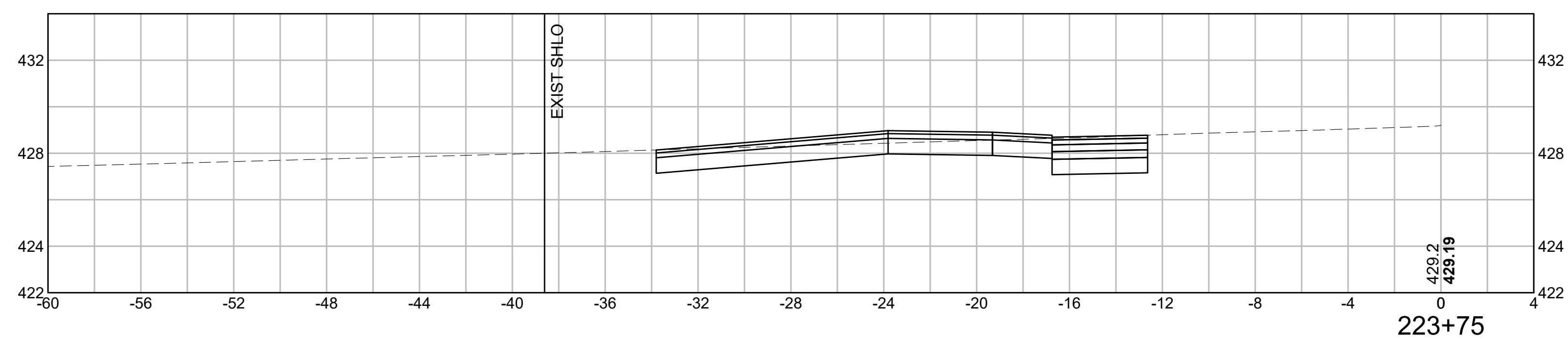
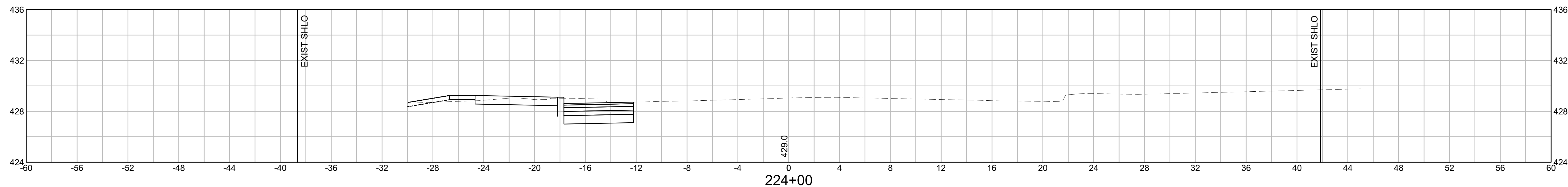


TRENCH DETAIL
NTS

MENDON
ROUTE 16

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	46	57

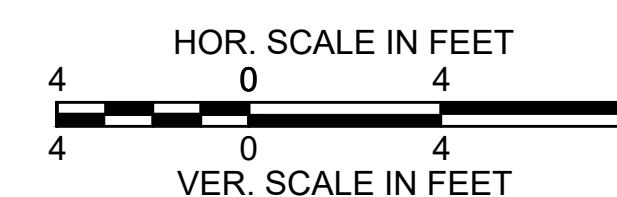
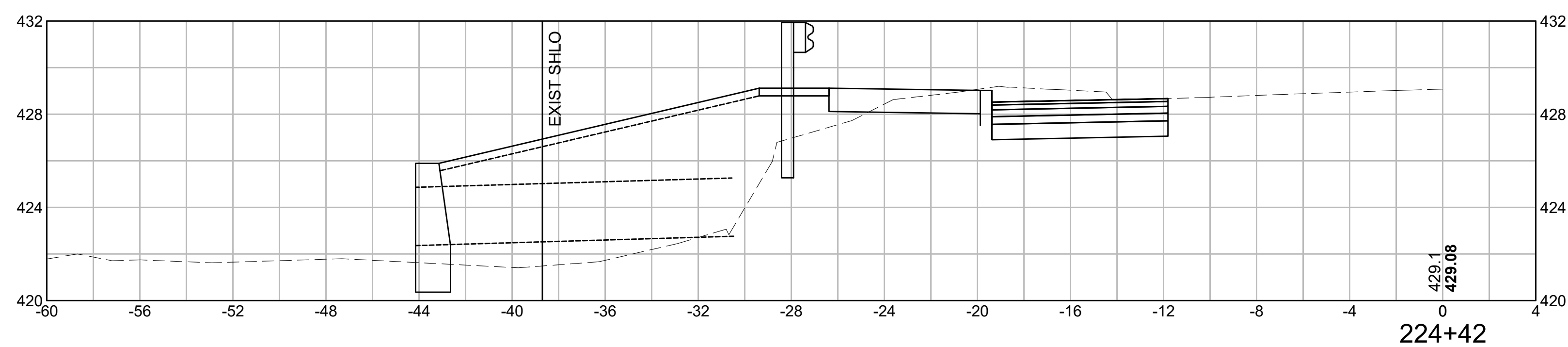
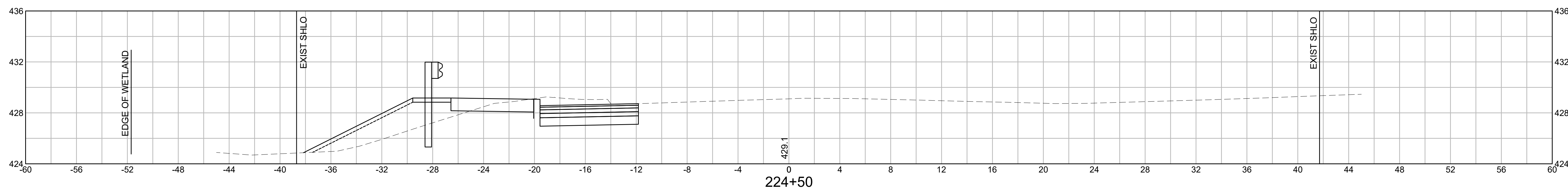
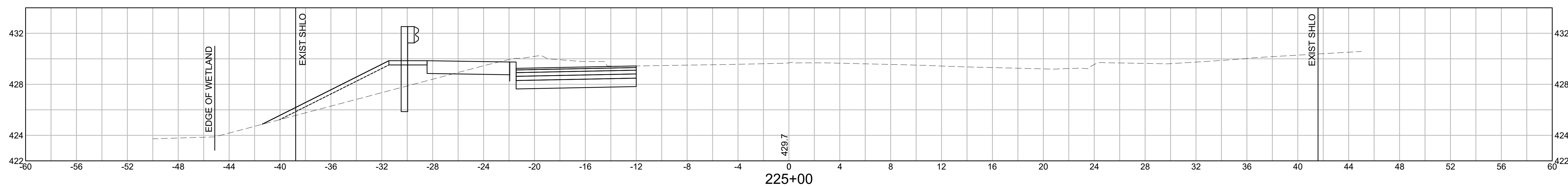
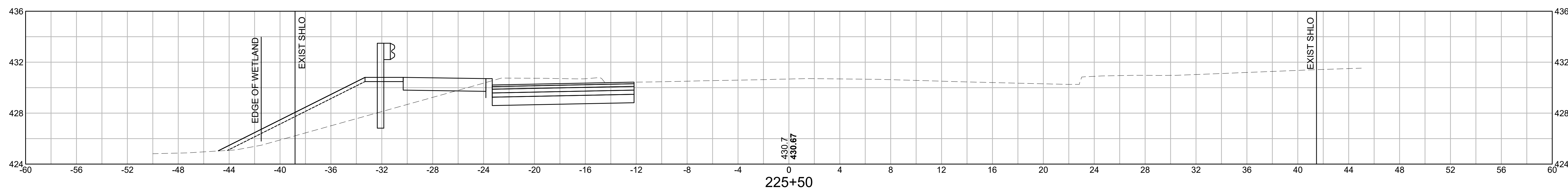
PROJECT FILE NO. N/A (ACCESS PERMIT)
CROSS SECTIONS - ROUTE 16
STA 223+00 TO STA 224+00



MENDON
ROUTE 16

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	47	57

PROJECT FILE NO. N/A (ACCESS PERMIT)
CROSS SECTIONS - ROUTE 16
STA 224+42 (L) TO STA 225+50

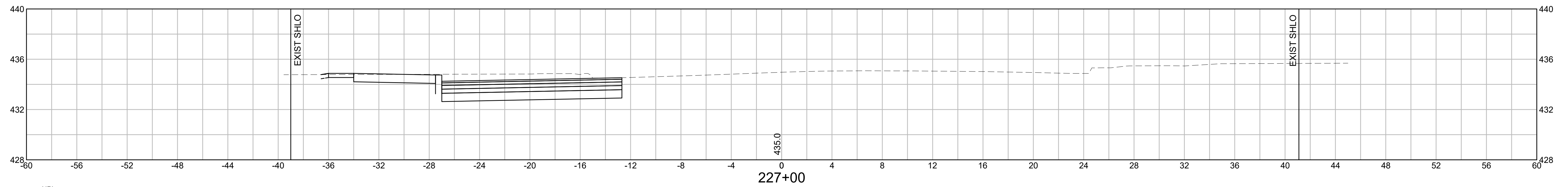
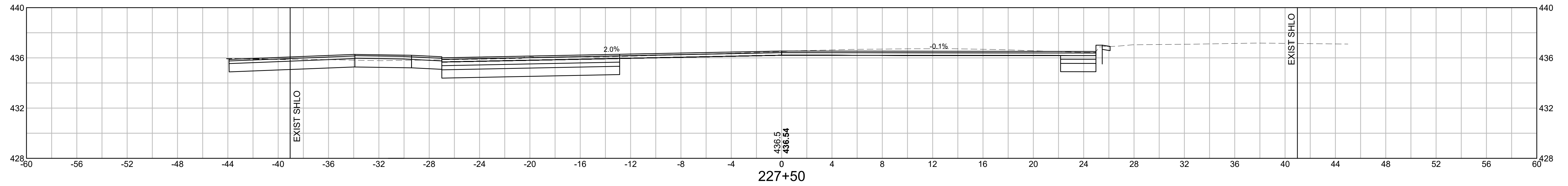


**MENDON
ROUTE 16**

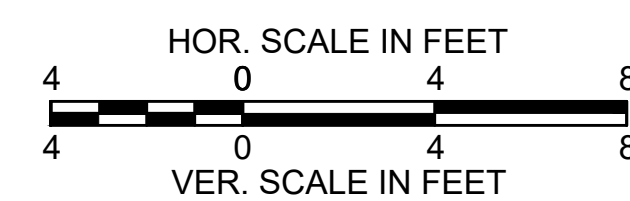
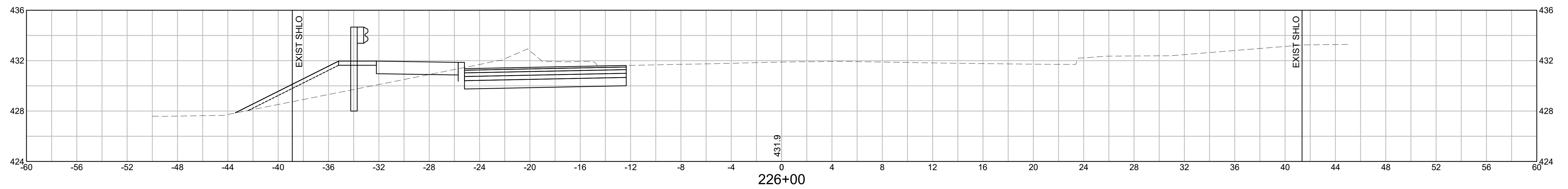
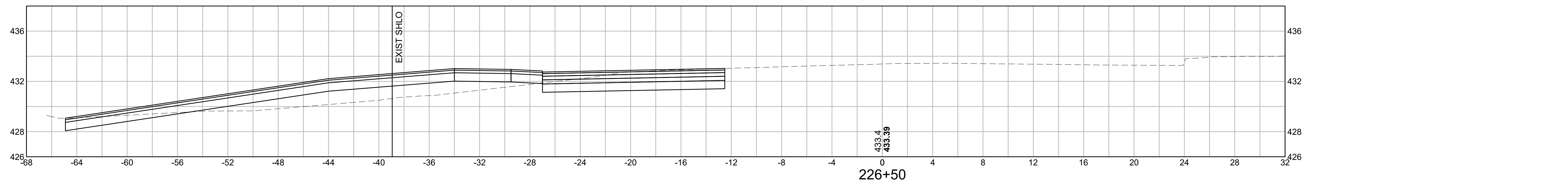
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	48	57
PROJECT FILE NO. N/A (ACCESS PERMIT)			

CROSS SECTIONS - ROUTE 16
STA 226+00 TO STA 227+50

UPL
25/208
+31.26



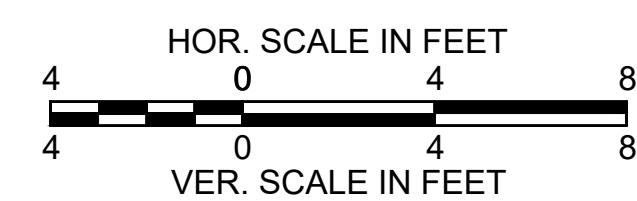
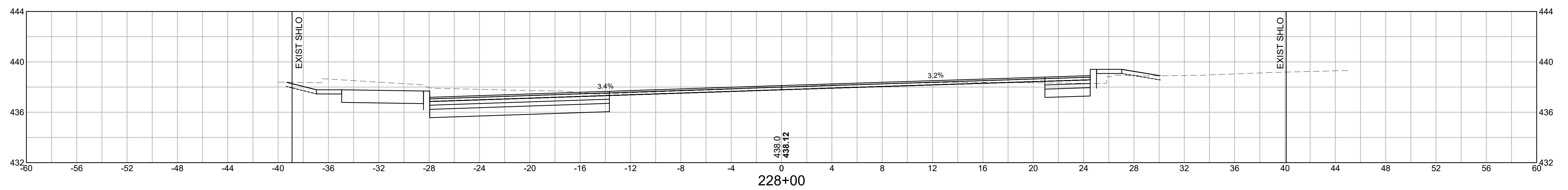
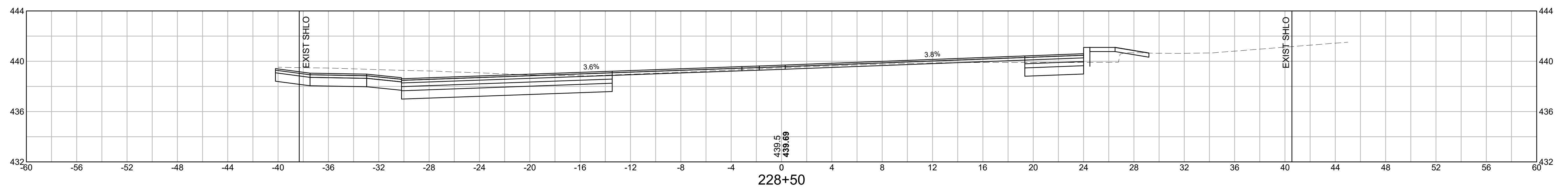
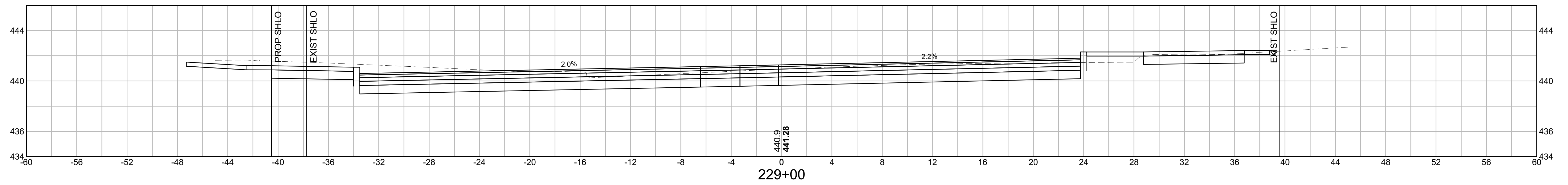
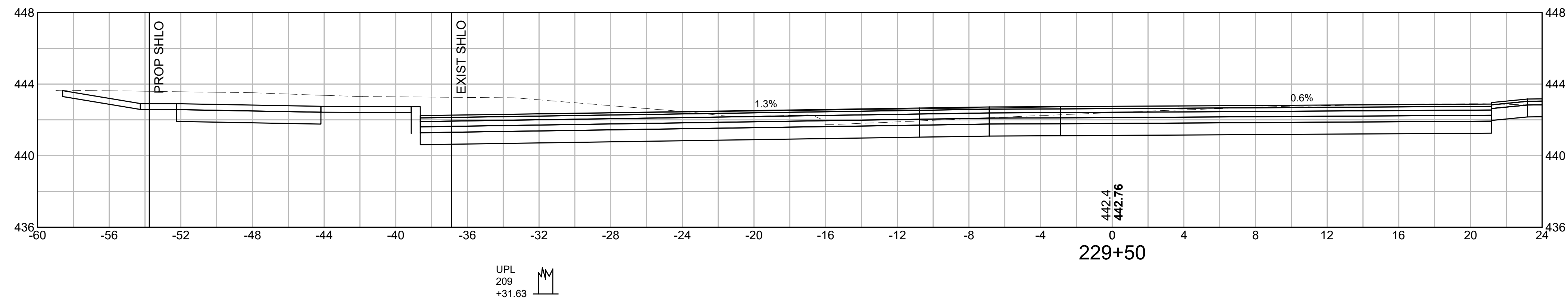
UPL
207-51
+25.92



**MENDON
ROUTE 16**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	49	57
PROJECT FILE NO. N/A (ACCESS PERMIT)			

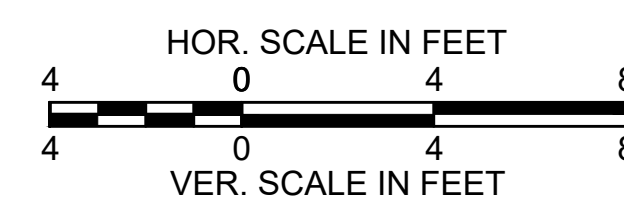
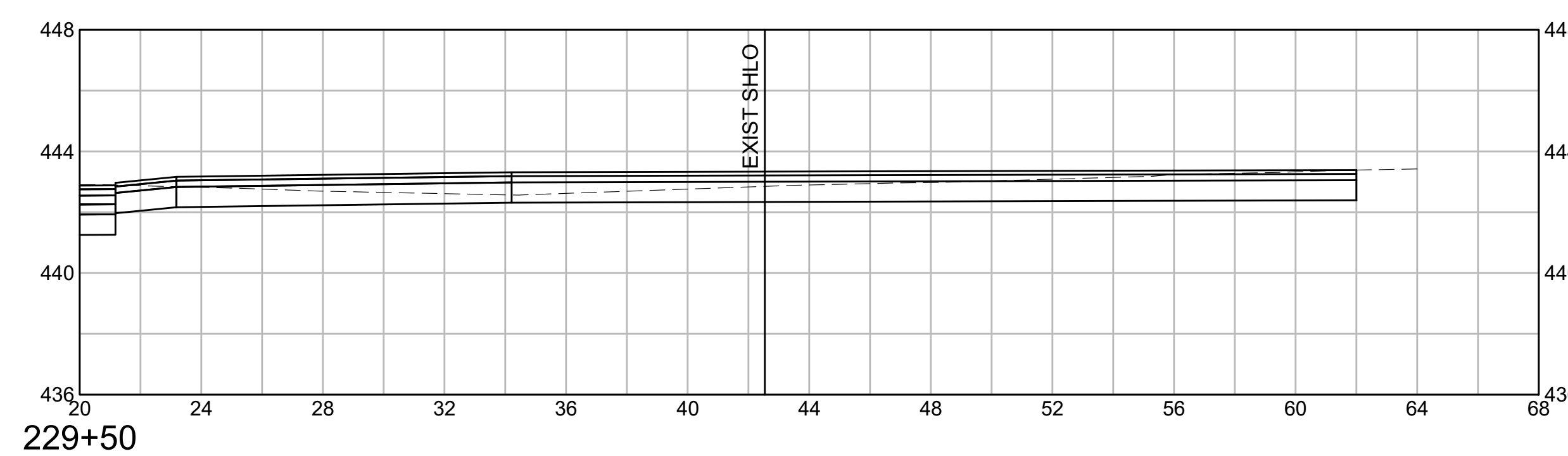
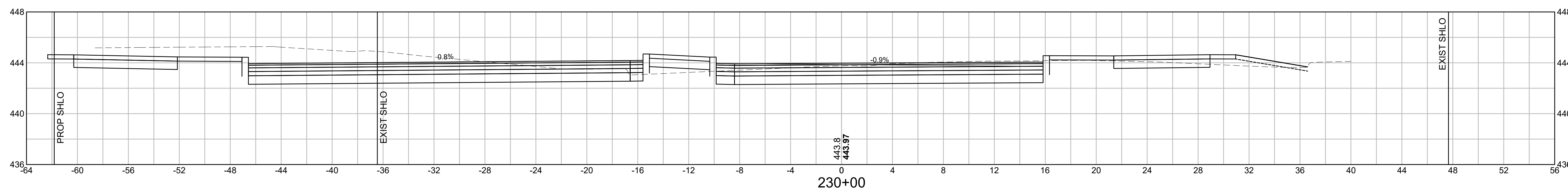
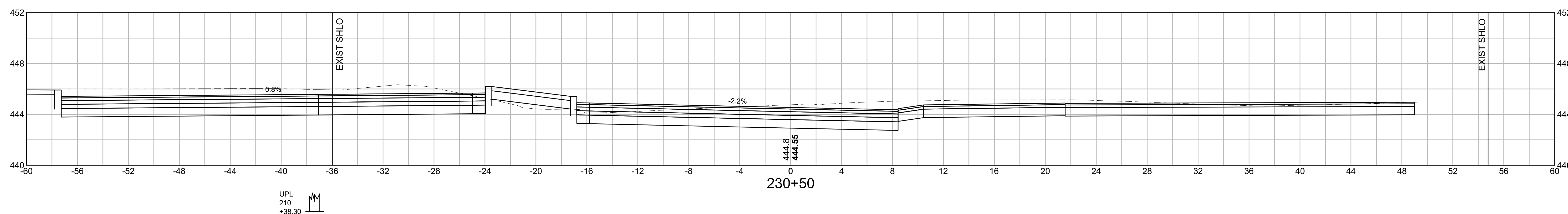
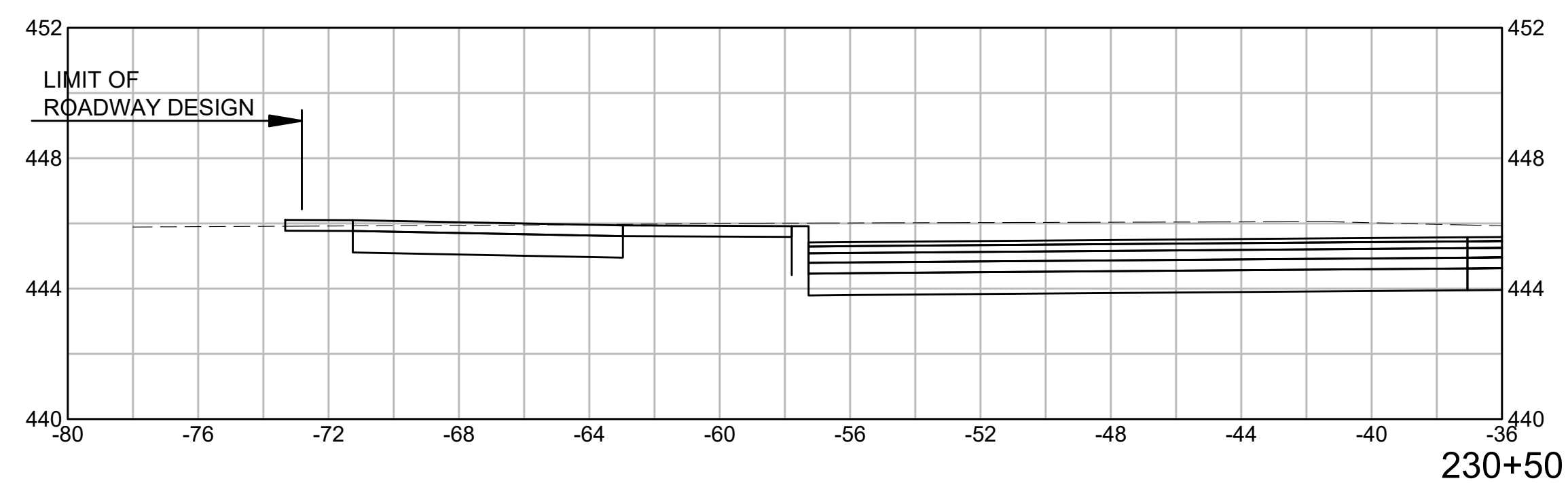
CROSS SECTIONS - ROUTE 16
STA 228+00 TO STA 229+50 (L)



**MENDON
ROUTE 16**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	50	57

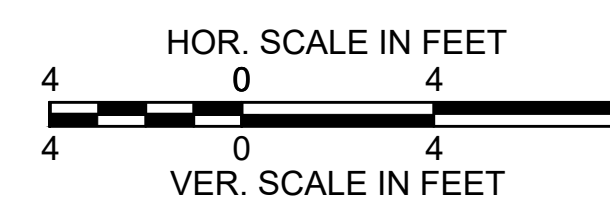
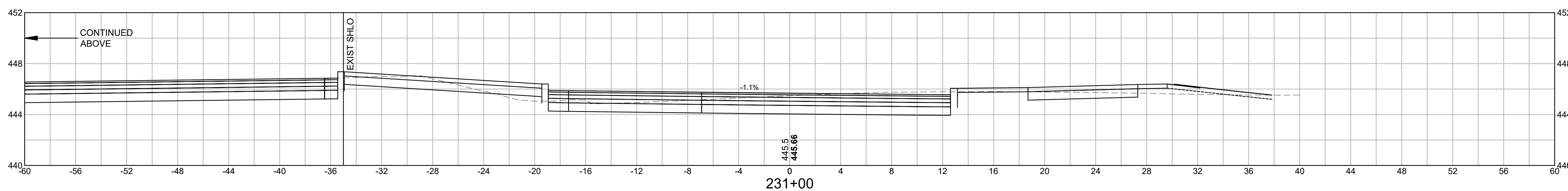
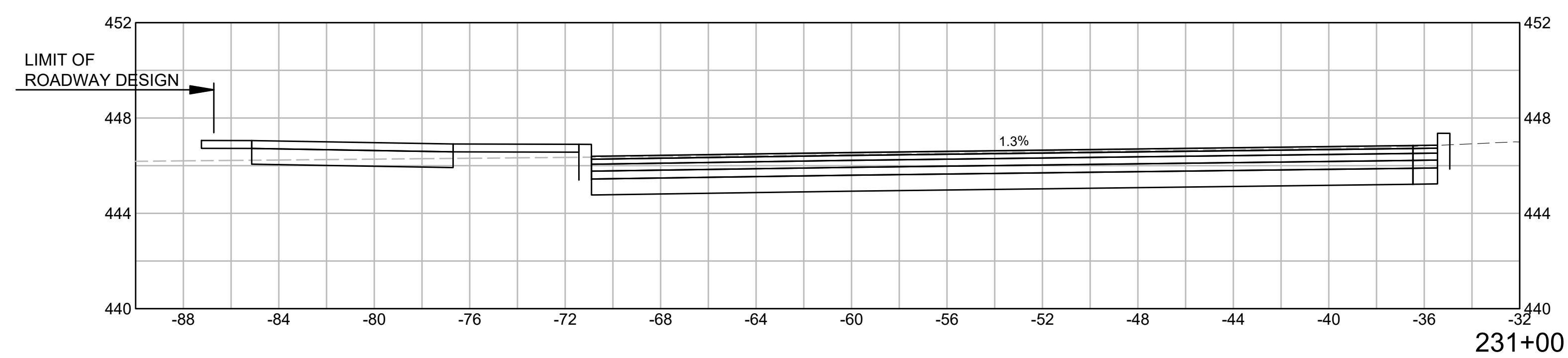
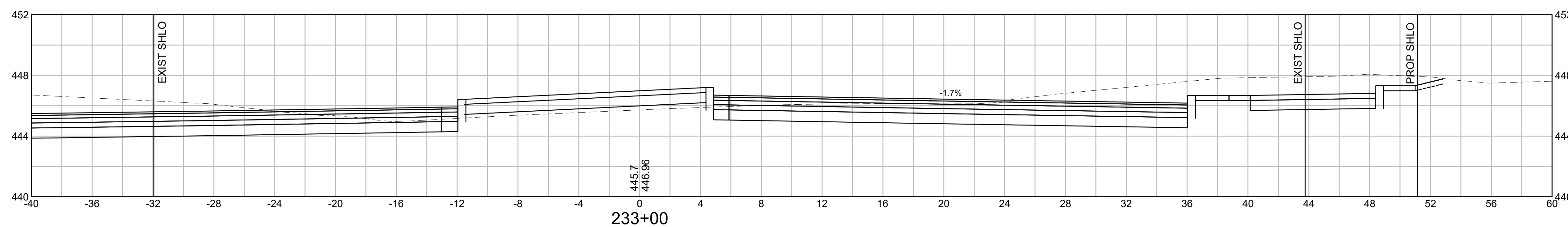
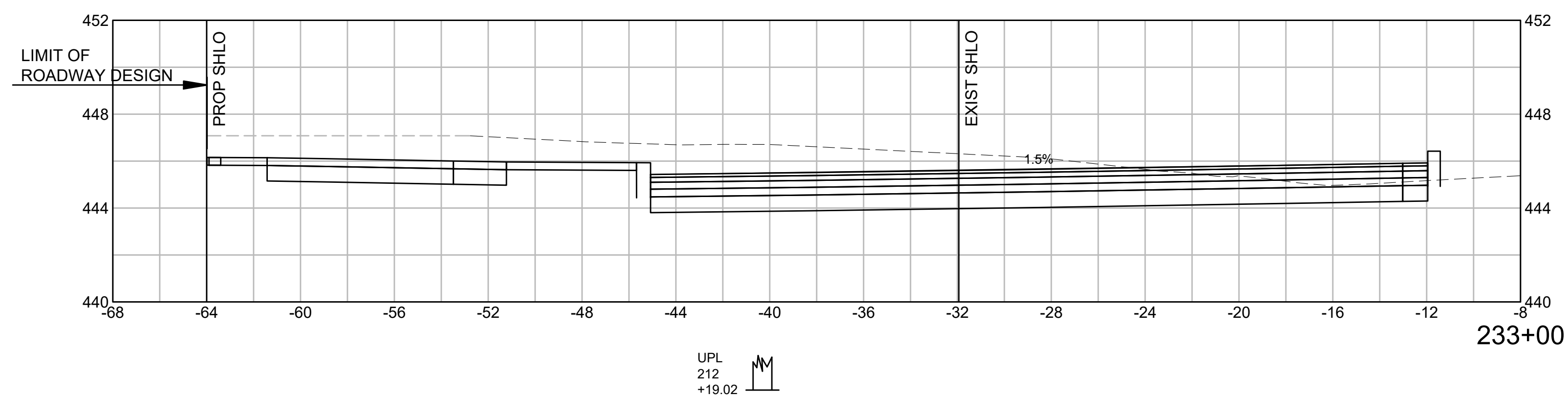
CROSS SECTIONS - ROUTE 16
STA 229+50 (R) TO STA 230+50 (L)



**MENDON
ROUTE 16**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	51	57

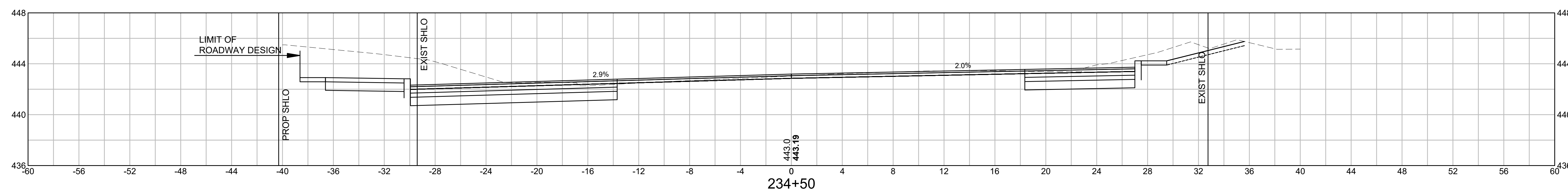
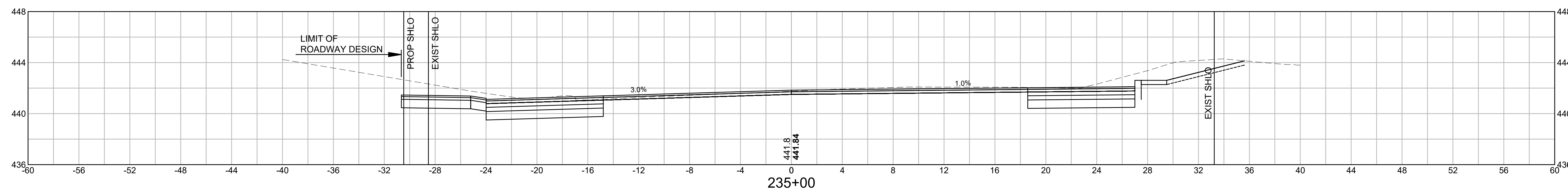
PROJECT FILE NO. N/A (ACCESS PERMIT)
CROSS SECTIONS - ROUTE 16
STA 231+00 TO STA 233+00 (L)



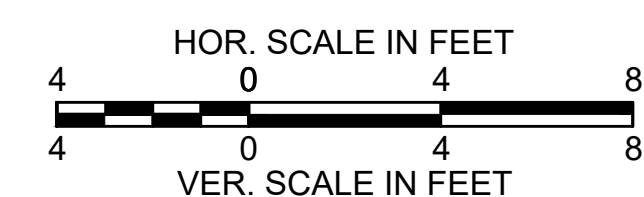
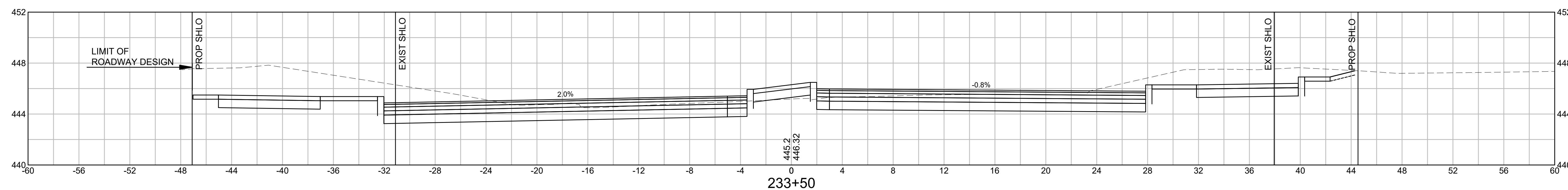
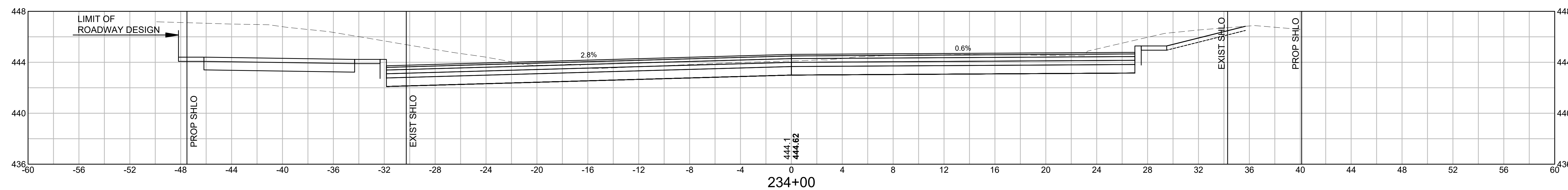
MENDON
ROUTE 16

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	52	57

PROJECT FILE NO. N/A (ACCESS PERMIT)
CROSS SECTIONS - ROUTE 16
STA 233+50 TO STA 235+00



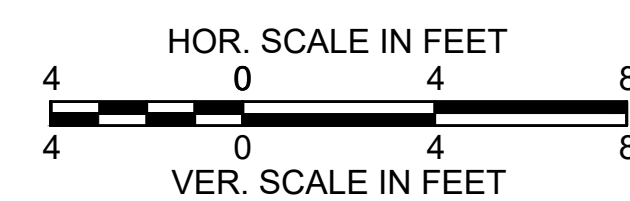
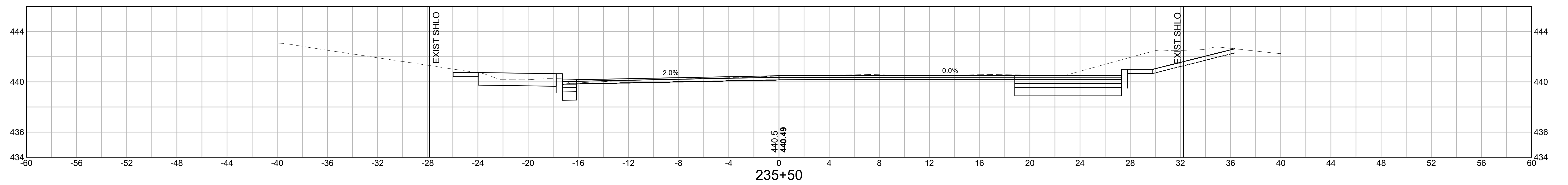
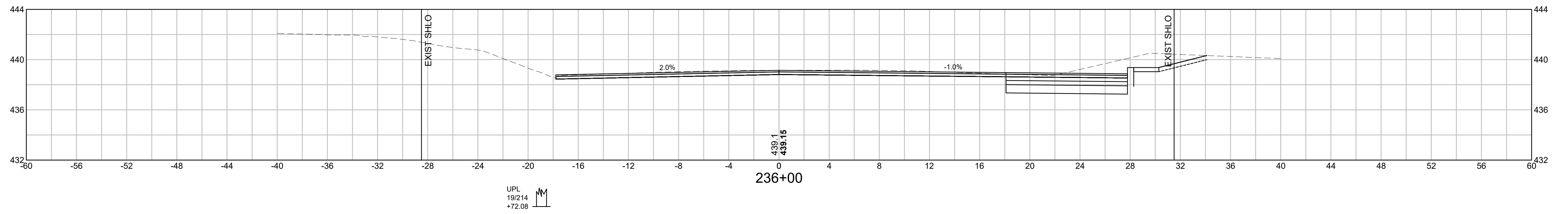
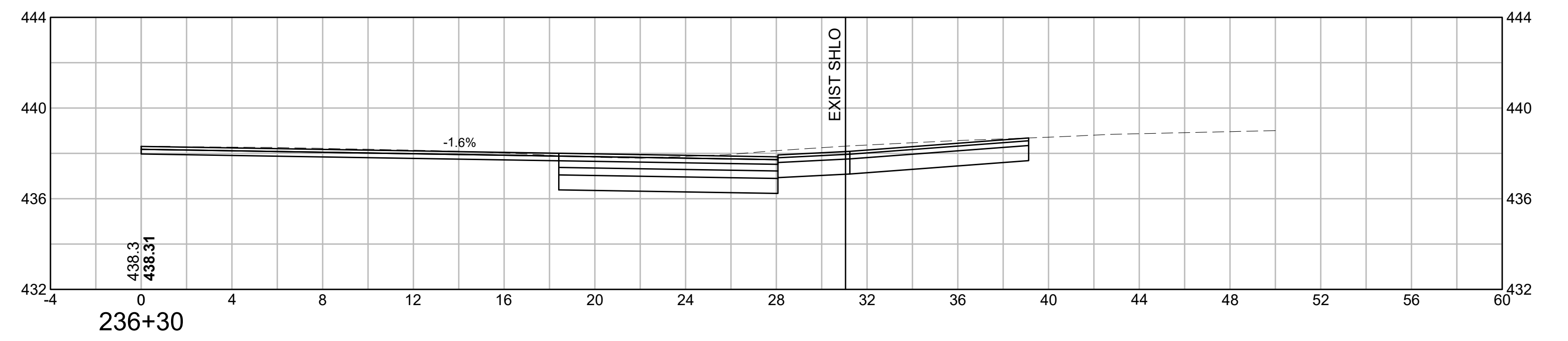
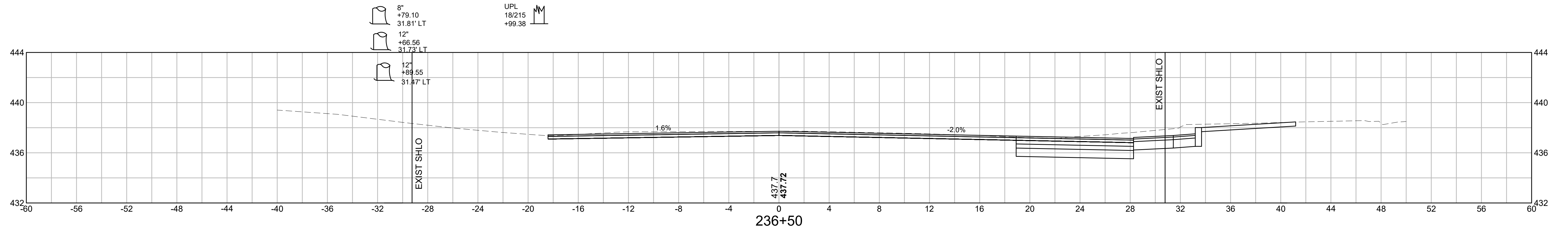
UPL
20/213
+45.14



**MENDON
ROUTE 16**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	53	57

CROSS SECTIONS - ROUTE 16
STA 235+50 TO STA 236+50



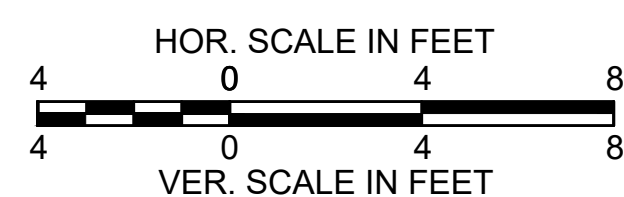
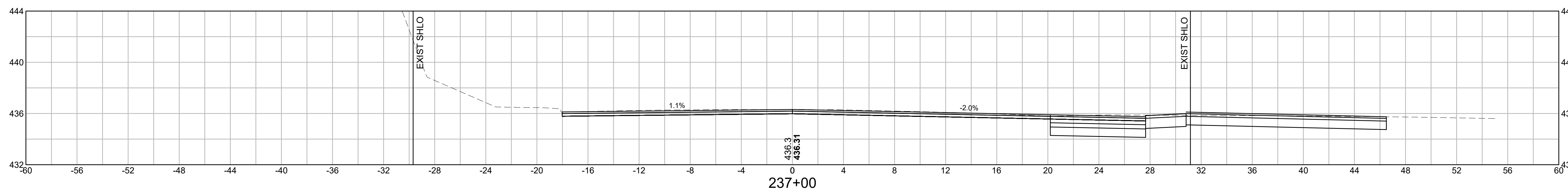
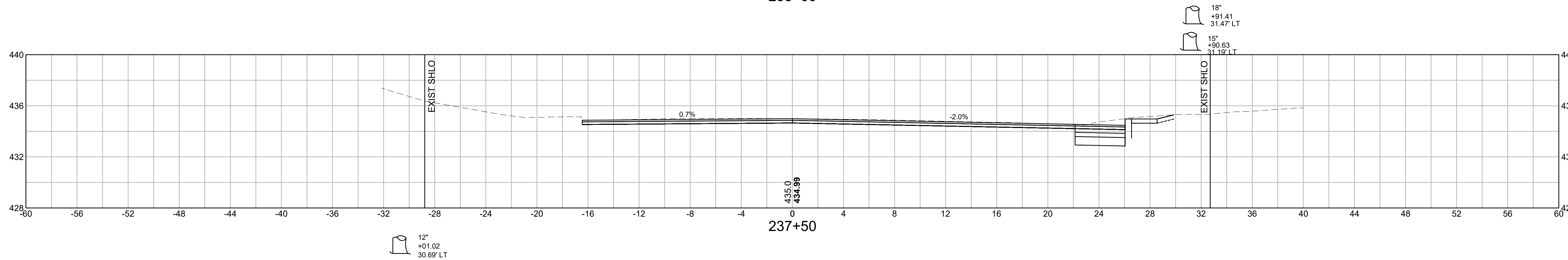
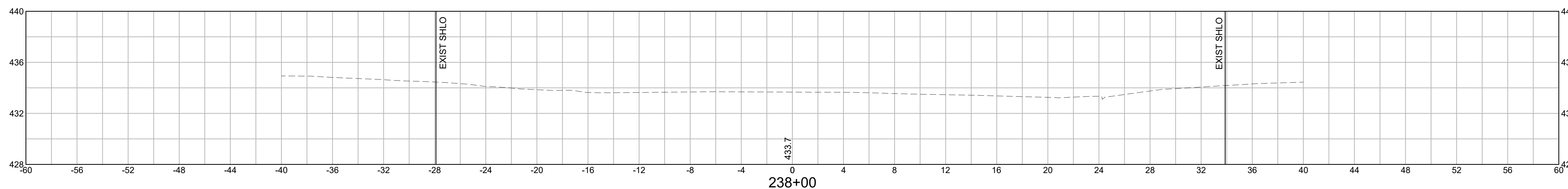
**MENDON
ROUTE 16**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	54	57

CROSS SECTIONS - ROUTE 16
STA 237+00 TO STA 238+00

UPL
17
+06.98

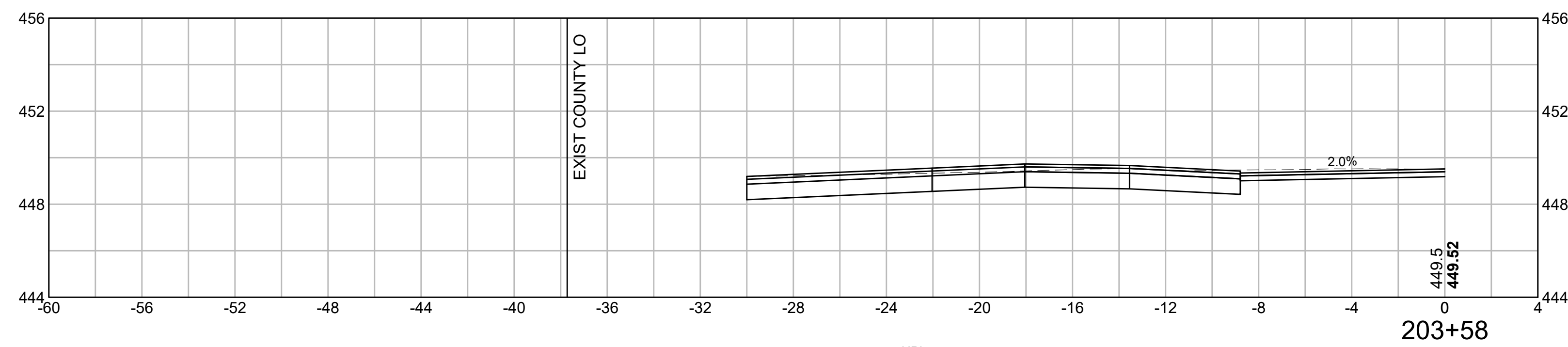
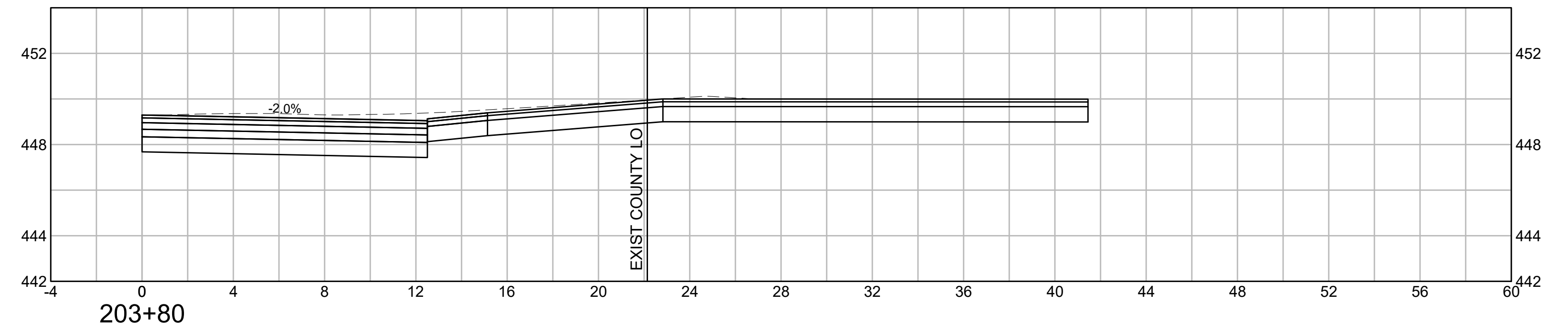
UPL
216-1
+08.69



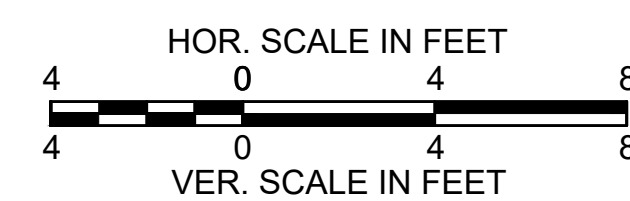
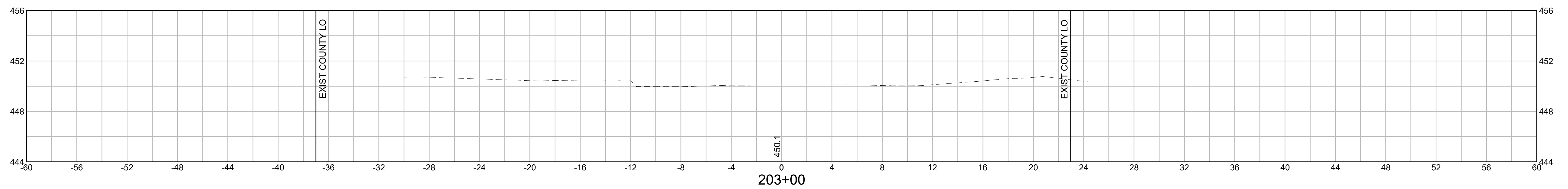
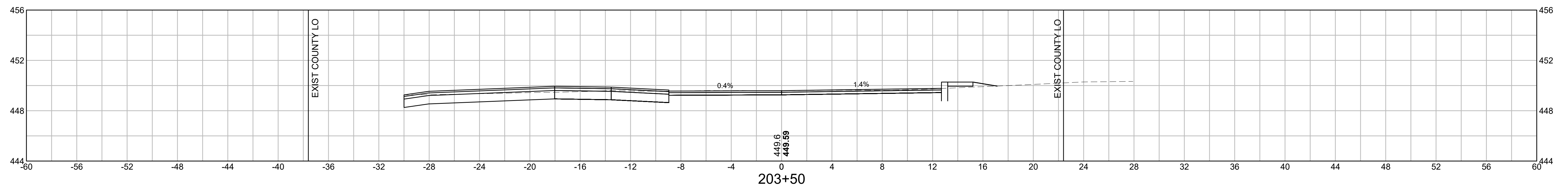
MENDON
ROUTE 16

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	55	57
PROJECT FILE NO. N/A (ACCESS PERMIT)			

CROSS SECTIONS - MILLVILLE STREET
STA 203+00 TO STA 203+80 (R)



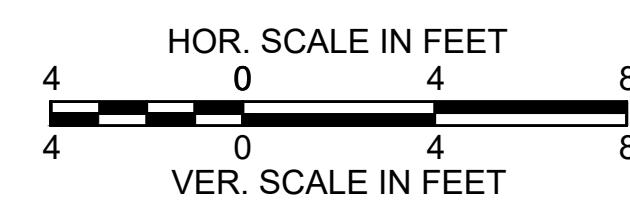
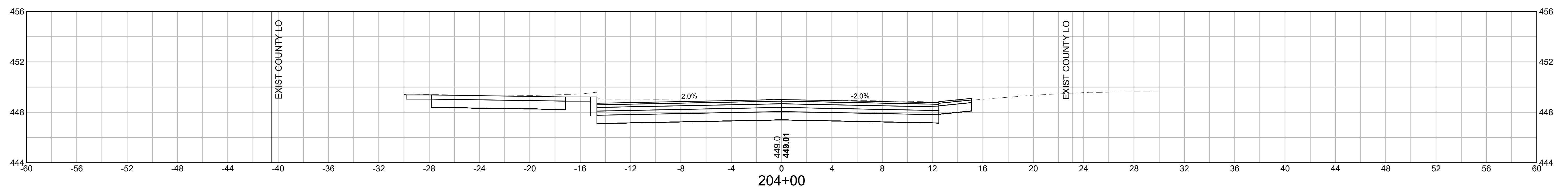
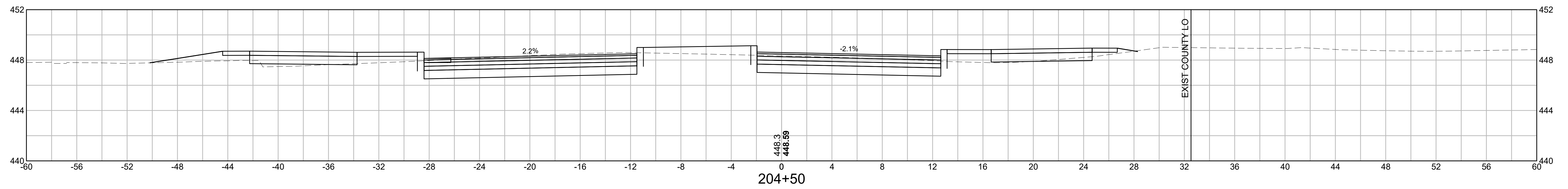
UPL
4/1
+98.36



**MENDON
ROUTE 16**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	56	57
PROJECT FILE NO. N/A (ACCESS PERMIT)			

CROSS SECTIONS - MILLVILLE STREET
STA 204+00 TO STA 204+50



MENDON
ROUTE 16

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	N/A	57	57
PROJECT FILE NO. N/A (ACCESS PERMIT)			

CROSS SECTIONS - SITE DRIVEWAY
STA 301+00 TO STA 301+50

